AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

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

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

Help ensure our sustainability.

Give to AgEcon Search

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

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

Assessing consumers' cognitive, affective and normative associations on willingness-to-pay for domestic foods

Conradin Bolliger
ETH Zurich, Institute for Environmental Decisions IED
Agri-food & Agri-environmental Economics Group

Paper prepared for presentation at the EAAE 2011 Congress
Change and Uncertainty
Challenges for Agriculture,
Food and Natural Resources

August 30 to September 2, 2011
ETH Zurich, Zurich, Switzerland

Copyright 2011 by [Conradin Bolliger]. All rights reserved. Readers may make verbatim copies of this document for non-commercial purposes by any means, provided that this copyright notice appears on all such copies.

I. INTRODUCTION

Do consumers buy domestically made (regional) food products, because they promise a better or different quality? Are these preferences the results of cognitive processes or are they based on emotional differentiation? Which role do normative mechanisms have when evaluating both domestic and foreign products?

Consumers are heterogeneous and differentiate between products from different places of origin, a phenomenon that has widely become known as the country-of-origin (COO) effect. The country-of-origin effect – usually operationalized as the "made-in" concept (AMINE ET AL., 2005) – has broadly been defined as the positive or negative influence that a product's country of manufacture may have on consumers' decision process and behavior (ELLIOTT & CAMERON, 1994; WATSON & WRIGHT, 2000). Considerable research indicates that COO information influence consumers' overall product evaluations, beliefs about product quality, and the likelihood of purchasing these products (e.g. HESLOP & PAPADOPOULOS (1993); PETERSON & JOLIBERT (1995); AL-SULAITI & BAKER (1998); VERLEGH & STEENKAMP (1999); PAPADOPOULUS & HESLOP (2003)). OBERMILLER & SPANGENBERG (1989) argue that COO-effects stem from one of three interrelated mechanisms: cognitive, affective and normative processes. These mechanisms may cause different impacts on final willingness-to-pay (WTP) estimates for a product with a certain COO.

The general aim of the present contribution is threefold. First, we highlight the various associations consumers relate to domestic (Swiss) food products, such as chicken cutlets and strawberries. Then, we opted to structure the highlighted associations as cognitive, affective and normative mechanisms as outlined in OBERMILLERS & SPANENBERG's conceptual framework. Finally, we use the structured associations as an explanatory factor in a willingness-to-pay regression model to assess the impact and possible effects of each of the three mechanisms on consumers' final WTP-estimates for domestic versus foreign food products.

The article is structured as follows: In the next section, embedded in a short overview of recent "place of origin research", the main research hypotheses are highlighted. In the forth section we outline the random utility framework as theoretical grounding of the dichotomous choice approach used to assess WTP for domestic "Swiss" origin versus imported "European" origin for the chicken and strawberry case. Then data collection and empirical results are highlighted. A short conclusion is given at the end.

II. LITERATURE REVIEW AND HYPOTHESIS

Within the realm of consumer decision making, COO is regarded as extrinsic information cue that acts as a risk mitigant or quality cue for consumers and thereby influences consumers' evaluation of and purchase intention towards a product (WATSON & WRIGHT, 2000). In addition to its role as a quality cue, Wyer and colleagues showed that the impact of COO cannot be explained entirely by a quality signaling process (HONG & WYER, 1989; LI & WYER, 1994). Moreover, country of origin has been found to have symbolic and emotional meaning to consumers (VERLEGH & STEENCAMP, 1999). Some authors reported that consumers link COO also to national identity, patriotic feelings and perceptions of national welfare (FOURNIER, 1989; BOTSCHEN & HEMETTSBERGER, 1998).

Such symbolic and emotional connotation transforms COO into an "expressive" or "image" attribute. Such attributes have been shown to be significant determinants of consumer preferences and an important source of brand equity (LEFKOFF-HAGUIS & MANSON, 1993). MAHESWARAN (1994) suggests that COO is used in product evaluation as a stereotyping process. This stereotyping process affects product evaluation in three ways. First, COO acts as a signal. Second, COO can be an independent cue, used along with other cues for product evaluation. Third, COO can be used as a heuristic to simplify the product evaluation process.

OBERMILLER & SPANGENBERG (1989) were the first who developed a theoretical framework of the various ways in which country of origin may influence consumers' product evaluation (cf. Table 1). The framework distinguishes between cognitive, affective and normative processing of the country of origin cue. VAN ALVENSLEBEN (2004) noted that the boundaries between these processes are fuzzy, and cognitive, affective and normative processes are interacting in consumer decision making. As a cognitive process, COO is a heuristic for making inferences about product quality. As an affective process, COO is a stereotype-driven attribute that links the product to a positive and/or negative emotional association with particular nation (e.g. domestic country). Finally, as a normative process, consumers may hold socially desirable behavioral norms linked to COO cues. When such norms exist regarding the correctness of purchases of products from specific nations, COO may affect purchase intentions directly, regardless of any product related beliefs (CHATTALAS ET AL, 2008).

Table 1 - Cognitive, affective and normative mechanisms within COO-context

PROCESS	DESCRIPTION	EFFECT
Cognitive	COO is a cue for product quality	COO is used as a "signal" for overall product quality and quality attributes, such as reliability and durability (Ly & Wyer, 1994) or freshness, taste, and traceability for foods (Banik, 2010, Leitow, 2005).
Affective	COO has symbolic and emotional value to consumers	COO is an image attribute that links the product to symbolic and emotional benefits, including social status and national pride (cf. Batra et al., 1998).
Normative	Consumer hold social and personal norms related to COO	Purchasing domestic products may be regarded as a "right way of conduct", because it supports the domestic economy (Shimp & Shama, 1987).

Source: VERLEGH & STEENCAMP, 1999

Within the context of foods, country of origin effects have been less frequently analyzed compared to international business or marketing literature. A specific overview of product country images for food products are given by SKAGGS ET AL. (1996). A more recent paper by LUSK ET AL. (2006) deduce a variety of research questions in the field of COO-labeling for food products from the general findings based on COO literature. Thereafter, the authors outlined implication for current policy.

However, with expanding global trade flows in agricultural and food markets in the last decade, a foods COO has become a more and more important cue for consumers worldwide when evaluating both domestic and foreign food products (GUERRERO, 2001; ALVENSLEBEN,

2001; AHMED ET AL., 2002). Some studies consider COO in food related contexts as fifth element in marketing-mix (FELZENSTEIN ET AL., 2004). Moreover, LUOMALA (2007) highlights that food origin influences consumers' decision-making in substantial and complex ways with regard to attitudes, evaluation, choice intention, and willingness to pay. Empirical studies have consistently confirmed the existence of consumers' ethnocentric tendencies vis-à-vis food products, and thus demand for domestic products (ORTH & FIBRASOVA, 2003, GEIGENMÜLLER, 2003; BANIK, 2010). This so called "domestic-country bias" which is manifested in stronger product preferences and higher WTP for home-made products have been shown throughout several consumer WTP-investigation conducted in the USA. LOUREIRO & UMBERGER (2003) found that Colorado consumers were willing to pay 38% and 58% more to obtain U.S. steak and hamburger, respectively. UMBERGER ET AL. (2003b) found that 69% of consumers in Denver and San Francisco were willing to pay a 19% premium for U.S. beef steak. LOUREIRO & UMBERGER (2005) found in a nationwide survey, that surveyed consumers were willing to pay about 2.5% premiums for U.S. chicken breasts, pork chops, and ribeye steaks. MABISO ET AL. (2007) found that consumers were willing to pay about $0.49 for bags of apples and tomatoes of U.S. origin.

Recently, research investigates the effect of regional food origin on consumer behavior (van Ittersum, 2001). In Germany several studies on this topic has been published over the last ten to fifteen years (e.g. BANIK 2010; DORANDT 2004; LEITOW 2005; PROFETA 2005; SCHRADER 1999; VAN ALVENSLEBEN, 2004; WIRTHGEN, 2003). But also in the US, the regional food origin has become a more and more prominent and popular research topic (e.g. TILMANY ET AL. 2010).

Many of the various investigations in this area find that the drivers why to prefer domestic (regional) over foreign food products seem to have generic characteristics (BANIK, 2010). In general, domestic (own region or own country) food products are associated to be more environmental friendly, to have shorter transportation and to be of a better food safety and food quality standard. Food safety and quality are associated with aspects such as better animal well-being, freshness or better taste (e.g. VAN ALVENSLEBEN, 2004). Other drivers for the preference of a domestic food alternative are the support of domestic economy and/or agriculture as well as a better reliance in the domestic food production process in general. The repeated description of the same items in the various investigations can be considered as a hint that the "domestic-country bias" is generic regardless of which place of manufacture. These general findings together with OBERMILLER & SPANENBERG'S conceptual framework lead us to the following hypotheses:

H1: The more domestic origin is associated with cognitive cues the greater the WTP-premium one is willing to pay to receive domestic food.

H2: The more domestic origin is associated with affective reasons the greater the WTP-premium one is willing to pay to receive domestic food.

H3: The more domestic origin is associated with normative aspects the less the WTP-premium one is willing to pay to receive domestic food.

III. THEORETICAL BACKGROUND

The consumer's decision process is modeled using a random utility (RU) framework (MCFADDEN, 1974, HANEMANN & KANNINEN, 1999). Operationalization of consumer utility, $U(y, x, m)$, is assumed to have three arguments: $\boldsymbol{y}$ is an indicator variable equal to one if the product carries the Swiss origin and zero for the European Union origin, $\boldsymbol{x}$ represents consumer characteristics that may affect consumer choice and $\boldsymbol{m}$ denotes consumer income level. The consumer is willing to pay $\boldsymbol{c}$ Euros to switch to a Swiss product which will make utility at least as great as it would be with the European origin. Econometrically, $\boldsymbol{c}$ can be considered as:

(1) $$U(0, x_0, m) \leq U(1, x_1, m - c)$$

where the 0 and 1 subscripts denote the choice of European and Swiss country-of-origin marked products, respectively. The consumer's utility function is unknown as some components are unobservable, and thus can be considered random variables from the researcher's standpoint (HANEMANN & KANNINEN, 1999, WAGNER, 2000). The observed utility $\boldsymbol{U}$ is subject to an error term and is therefore decomposed into an unobservable part and an error term so that $U(\cdot) = V(\cdot) + \varepsilon$. The random error term $\boldsymbol{\varepsilon}$ is assumed to be independently distributed with a mean of zero. The consumer's decision to pay $\boldsymbol{c}$ Euros in terms of utility can be described as:

(2) $$V(0, x_0, m) + \varepsilon_0 \leq V(1, x_1, m - c) + \varepsilon_1$$

The observed choice coincides to the expected optimal $\boldsymbol{c}$ such that $E\{V(0, x_0, m) + \varepsilon_0\} = E\{V(1, x_1, m - c) + \varepsilon_1\}$. In this concept it is assumed that an indifference point between the modalities 1 and 0 exists and can be expressed in a probability framework such as:

(3) $$Pr(WTP \geq c) = Pr(V_0 + \varepsilon_0 \leq V_1 + \varepsilon_1) = Pr(\varepsilon_0 - \varepsilon_1 \leq V_1 - V_0) = 0.5$$

Finally let $F(\cdot)$ be the probability distribution. $F(\cdot)$ satisfies $Pr\{U(0, x_0, m) \leq U(1, x_1, m - c)\} = F\{\Delta V(c)\}$. HANEMANN & KANNINEN (1999) show that if $F(\cdot)$ represents a probit or logit distribution, the indifference point corresponds to $\Delta V(c) = 0$.

This theoretical model sets the grounding for the empirical representation of the aggregated WTP of the sample. Let $V(1, X, m - B) + \varepsilon = \alpha + \rho B + \beta' X + \varepsilon$ when an individual accepts to pay a premium of a certain amount $\boldsymbol{B}$ for a certain product's country-of-origin denoted as "Swiss" and let $V(0, X, m) = \beta' X$ when an individual rather purchases another product's origin represented as "European". The indifference point defined above satisfies the following condition:

(4) $$c^* = \frac{-\alpha}{\rho}$$

Estimated for an entire sample, the indifference expresses the average minimal WTP for the "Swiss" origin. Therefore, the average WTP can be estimated by $\overline{WTP}_i = \frac{\overline{-\alpha}}{\overline{\rho}}$. In the

current study, a modified binary choice model is chosen to analyze the decision process and willingness-to-pay for Swiss chicken cutlets and strawberries.

IV. METHODOLOGICAL APPROACH

In assessing consumers' willingness-to-pay estimates for the product attribute "Swiss (domestic) origin" relative to "European (imported) origin" we applied a double-bounded dichotomous choice model. In this contingent valuation procedure the participants are generally questioned about two bids. The amount of the second bid is contingent upon the answer of the first bid. Survey participants are asked initially whether they would be willing to pay a given sum of money (b_1), or not; then they are questioned about a second sum of money which is higher (b_2^H) than the first $(b_2^H > b_1)$ – if the first bid was accepted – and lower (b_2^L) than the first $(b_2^L < b_1)$ – if the first bid was turned down (HANNEMANN & KANNINEN 1999; WAGNER, 2000). Survey respondents provided *"Yes"/"No"* answers to both valuation questions. The set of possible outcomes in this approach, here termed S^{DB}, therefore contains four answer sequences to the two WTP questions: $S^{DB} = \{(\text{"No, No"}), (\text{"No, Yes"}), (\text{"Yes, No"}), (\text{"Yes, Yes"})\}$.

In our specific survey, we used the first choice question (b_1) to exclude participants from the second question depending on the answer upon the first bid. In both case studies, the price on the first bid-level (b_1) was set equal to zero. Thus, participants first could choose between their preferred origin – domestic Swiss or imported European – based on equal price. If consumers expressed a preference for Swiss cutlets or Swiss strawberries, they then and only then were offered a second bid (b_2^H) with a price increase in favor of the Swiss meat or strawberries, respectively; otherwise they were excluded from the survey. The survey structure of the restricted double-bounded dichotomous choice model thus offers only two possible intervals for the actual willingness-to-pay, here termed S^{DB+}. Based on the depicted procedure, the following discrete outcomes are observable:

(5)
$$S^{DB+} = \begin{cases} 1 & (\text{„Yes, No"}) \quad b_1 \le WTP < b_2^H \\ 2 & (\text{„Yes, Yes"}) \quad b_2^H \le WTP \end{cases}$$

WTP here describes the individual willingness-to-pay for Swiss chicken cutlets or strawberries. To evaluate the dichotomous choice described here, separate logit models were estimated based on the following logistic probability function:

(6)
$$P_i = F(WTP_i) = \frac{1}{1+e^{-WTP_i}} = \frac{1}{1+e^{-(X_i'\beta)}}, i = 1,\ldots, n$$

where P_i is the probability that the ith consumer will make a certain choice (answer "yes"), given the information conditions contained in $\mathbf{X_i}$ and β is a conformable vector of parameters. Therefore, if (7) represents the probability a consumer will answer "yes" to the question whether he or she will pay a premium for the domestic Swiss food origin, then $1 - P_i$ will be the probability associated with answering "no" (LOUREIRO & UMBERGER, 2003). Thus,

(7)
$$1 - P_i = \frac{1}{1+e^{WTP_i}}.$$

To estimate the odds ratio in favor of answering "yes" versus "no", the ratio of both probabilities must be calculated:

(8) $$\frac{P_i}{1-P_i} = \frac{1+e^{WTP_i}}{1+e^{-WTP_i}} = e^{WTP_i} = e^{X_i'\beta}.$$

By taking the natural log of (9), the odds ratio in favor of those respondents answering "yes" becomes a linear function of $\mathbf{X_i}$, where $\mathbf{X_i}$ is a vector of subjective consumer preferences when buying chicken or strawberries (LOUREIRO & UMBERGER, 2003). This equation can finally be written as:

(9) $$\log it(P_i) = \log\left(\frac{P_i}{1-P_i}\right) = WTP_i = X_i'\beta$$

The parameters represented by the vector β measure the change in the odds ratio for a change in a unit of an explanatory variable and cannot be interpreted as the direct effects on the probability supporting the purchase of a Swiss product (LOUREIRO & UMBERGER, 2003). The underlying statistical model is based on a latent and continuous unobservable variable (WTP_i^*) which, in the context of domestic versus imported food choice, could be interpreted as consumers' desire for Swiss origin. The observable variable, which is modeled by the researcher, is the response to the dichotomous choice. Thus the latent model becomes:

(10) $$WTP_i = I_{(0,\infty)}(WTP_i),$$

Where $I_{(0,\infty)}$ is an indicator variable that restricts the observable WTP to the positive domain, and $WTP_i^* = \mathbf{X_i}\beta + \varepsilon_i$ (LOUREIRO & UMBERGER, 2003). Therefore,

(11) $$WTP_i = \begin{Bmatrix} 1 \\ 0 \end{Bmatrix} \quad if \quad WTP_i^* = X_i'\beta + \varepsilon_i \begin{Bmatrix} > \\ \leq \end{Bmatrix} 0.$$

The ε_i are i.i.d. unobservable random variables, following a logistic distribution with mean zero and variance of $\pi^2/3$ (WAGNER, 2000). A "yes" response is observed if and only if the latent variable is greater than zero.

V. DATA COLLECTION

The two consumer surveys took place in January 2007 (chicken) and in of May 2008 (strawberries). The survey instrument was designed following the National Oceanic and Atmospheric Administration (NOAA) panel recommendations including the application of conservative measures (WTP question), the dichotomous choice WTP format (as described above), and the use of personal interviews. After the first bid question – as it is good practice for double-bounded-choice models – participants were asked to reason spontaneously why they preferred the chosen product (ARROW ET AL., 1993). Thus, participants highlighted in own words facts they associate with the preferred provenance. Table 2 gives a overview of the given answers.

Following procedures similar to those used by LUSK ET AL. (2001), LOUREIRO ET AL. (2002) or LOUREIRO & UMBERGER (2003) our survey data were collected in a grocery store setting. This allows data to be obtained directly from the actual decision makers. The surveys took place in both the French and the German-speaking part of Switzerland, either in the chicken or in the fruit section of eight grocery stores of the largest Swiss retailer. The stores were nearly identical in respect to size, selection, and product presentation. An interesting characteristic of the grocery stores where the surveys took place was the fact that in both, the chicken and the strawberry case, it was common to have a generic European and Swiss

alternative. In the chicken case, consumers were additionally offered an organic and an animal friendly product. This allowed consumers to consider a variety of alternatives. For Swiss standards, the stores can be characterized as semi-urban or urban, located either in the city centre (e.g. Basel, Bern, Lausanne, and Zurich) or in the agglomeration (e.g. Geneva, Fribourg). Sample selection in our approach was solely based on actual consumer's purchase decisions, meaning that only actual chicken or strawberry buyers were interviewed. In order to collect representative samples, including multiple segments of the shopping population, the surveys were conducted during the entire weeks except Mondays. But as with all surveys, the ability of the sample to represent the population is a concern. In the chicken meat case our final sample added up to 636, in the strawberry case to 529 valid questionnaires.

The first versions of the questionnaires were sent to experts for evaluation. In a second step they were pre-tested in the town of Basel (chicken case) and Schaffhausen (strawberry case) in a grocery store setting. During this evaluation and pre-testing process, some adjustments were made to improve both, the interview duration – which generally should not exceed ten minutes – and its comprehension. The final questionnaire originally contained five sections presented in the following order: warm-up questions about participants' general chicken or strawberry consumption patterns, questions concerning the actual purchase, the valuation scenario and its description, information about participants' ecological and ethological concerns, and concluded with some socio-economic questions. For the purpose of this paper we only use the results of the valuation scenario in which consumers were asked the following three questions:

> *Suppose that this grocery store offers only two different types of chicken cutlet (strawberry) products, the one is imported from the European Union and the other is produced within Switzerland. Which of the two alternatives – the European or the Swiss – would you prefer when both are offered at equal price, let's say at 22.50 CHF per kilogram (5.80 CHF per 500g in the strawberry case).*
>
> *[0] = EU [1] = CH*
>
> *Can you tell me one reason, why you prefer the EU/CH product? ……*
>
> *Now, assume the price for one kilogram (500 gram) of Swiss chicken cutlet (strawberries) is [bid] higher compared with the European chicken cutlet (strawberries) which is sold at 22.50 CHF/kg. Which alternative would you choose right now?*

In this question, participants were randomly offered one out of three bids – price increase of +7 CHF/kg, +10 CHF/kg, or +13 CHF/kg in the chicken, and + 1 CHF/500g, +2.50 CHF/500g, or +4 CHF/500g in the strawberry case. The bids were set according to actual product prices as found in the researched stores. In the chicken case, the average price per kilogram of about 22.5 CHF/kg of the standard chicken cutlets imported from the European Union was used as starting point. In the strawberry case, the average price of 5.80 CHF per 500 grams strawberries was taken as basin point. However, customers who preferred as first choice the European alternative were excluded from the survey.[1]

1. In the researched stores the price for standard chicken breasts ranged from 21.60 to 34 CHF/kilogram. The difference between the standard Swiss chicken cutlets compared to the one imported from the European Union added normally up to 10 CHF/kilogram. In the case of special offers on Swiss chicken cutlets, the kilo was

Based on the first bid (b_1 = equal price) we found in both the chicken and the strawberry case a strong preference for the domestic Swiss alternatives (chicken 85%, strawberry 92%). According to the open question asked between the first and the second bid, participants highlighted a wide variety of associations in connection with their preferred product attribute "Swiss origin". We translated the various given answers into about 30 different association patterns for both the chicken and the strawberry case. The emphasis of the given reasons varied across the case two studies but generally we found good accordance regarding the two case studies (cf. Table 2). The differences are particularly the results of the diverse product categories in question, namely a fruit and a meat product, which led in certain aspects to different associations, for example stock breeding (chicken) or less pesticide use (strawberry).

Finally, we summarized the 30 associations in two ways (cf. Table 2). First, we built an factor variable with eight different categories viz, "*eating quality*", "*product safety*", "*personal reasons*", "*economic reasons*", "*production method*", "*ecological reasons*", "*price and appearance*", and "*other or no reasons*" which have been coded as well. Second, we built three different variables each of them representing one of the mechanism influencing COO-effects, i.e. "*cognition*", "*affect*", and "*norm*".

VI. EMPIRICAL SPECIFICATION

To simplify the comparison of the results between the two case studies and the different coding schemes on the one hand and the highlighted hypothesis on the other, we only use the coded answers beside the bid as explanatory variable in our logit regression. Thus the empirical formulation of our model becomes:

$$WTP_i^* = \alpha_0 + \rho Bid_i + \beta_1 Association_i + \varepsilon_i \tag{12}$$

Here, "*Bid*" represents the random amount which has been offered to the participants. The observable characteristics of the individual are represented by the column vector **X**. In this case, **X** is either represented by an eight-level or a five-level factor named "*Association*" which represents the previously defined categories. ε is a random variable accounting for unobservable characteristics following a logistic distribution with mean zero and variance $\pi^2/3$ (WAGNER, 2000). α, ρ, and β are the parameters which are to be calculated. Note, the "bid" variable enters the model in its linear form, because nonlinear transformations were not statistically significant in any of the logit models.

approximately 7 CHF more expensive than the EU alternative. In reality a price premium of 13 CHF/kilogram does not exist, and was merely supposed to assess the upper limit of the WTP. In the strawberry case the price ranged from 3.90 to 12.60 CHF / 500g with an average price of about 5.80 CHF / 500g which was set as starting point.

Table 2: Reasons given spontaneously to explain first choice: CHICKEN & STRAWBERRY CASE				
	CATEGORY	MECHANISM	CHICKEN	STRAWBERRY
	subjective summarizing into 8 levels	cognitive [c], affective [a], normative [n]	number of mentions	
patriotic feelings	personal norms	n	13	15
solidarity with producers		n	6	3
as a matter of principles		n	4	-
as a matter of tradition or habit		n	3	-
defending Swiss culture		n	2	-
because of mistrust vis-à-vis EU		n	8	4
imports are not necessary		n	6	-
because I live here		n	9	9
homeland or because I am Swiss		n	8	5
because it is from our surrounding area		n	14	38
because it is a Swiss product		n	12	12
supporting Swiss agriculture	economic reasons	n	43	49
supporting Swiss economy		n	34	10
Supporting local economy		n	18	-
supporting domestic production		n	23	37
of better taste	eating quality	c	-	37
more aromatic		c	-	13
of better maturation		c	-	25
fresher		c	-	11
of better storage life		c	-	3
of better quality		c	54	14
ecologically worthwhile	ecological reasons	a/c	14	23
it is more environmentally sound		a/c	8	14
short transportation		c	22	48
organic is most important criterion	production method	c	10	7
better production method		c/a	23	17
full confidence in production method		a	15	16
less pesticide use		c/a	-	13
better species-appropriate stock breeding		c/a	31	-
better controls	food safety	c/a	19	5
food safety reasons		c	28	-
traceability		c	14	3
for my personnel well being		a	8	6
more confidence		a	43	11
whatever provenance & no reason	no reasons	0	36	15
price is most important criterion	price & appearance	0	48	37
visual nature is most important criterion		0	9	11

VII. RESULTS

Taking Obermillers & Spanenberg's framework into account, six of the previously set categories can be assigned to one of the processes underlying COO-effects. Eating quality and food safety aspects can be regarded as cognitive cues whereas personal and ecological reasons are considered as affective cues. Finally, economic motive is regarded as a normative cue. Production standard is seen as a hybrid of cognitive and affective

components. It is impossible to distinguish between consumers who are cognitively really aware of the production mechanism within Swiss agriculture and those who just assume and hope that the production standard in Switzerland is better than its counterpart.

As can be easily seen in figure 1a) we found some substantial differences between the two case studies concerning responded associations. For example, food safety aspects are regarded more important for a meat product than for fruits. Obviously, the large difference for this item might be due to different coding scheme, i.e. less pesticide use is considered as part of the production standard category whereas animal welfare belongs to the food safety category. Moreover, we find relevant differences between the case studies in two categories "eating quality" and "ecological reasons", respectively. For both, it seems rather logic. Eating quality dimensions, such as freshness, aroma and sweetness are much more common to have in mind regarding strawberry then chicken meat.

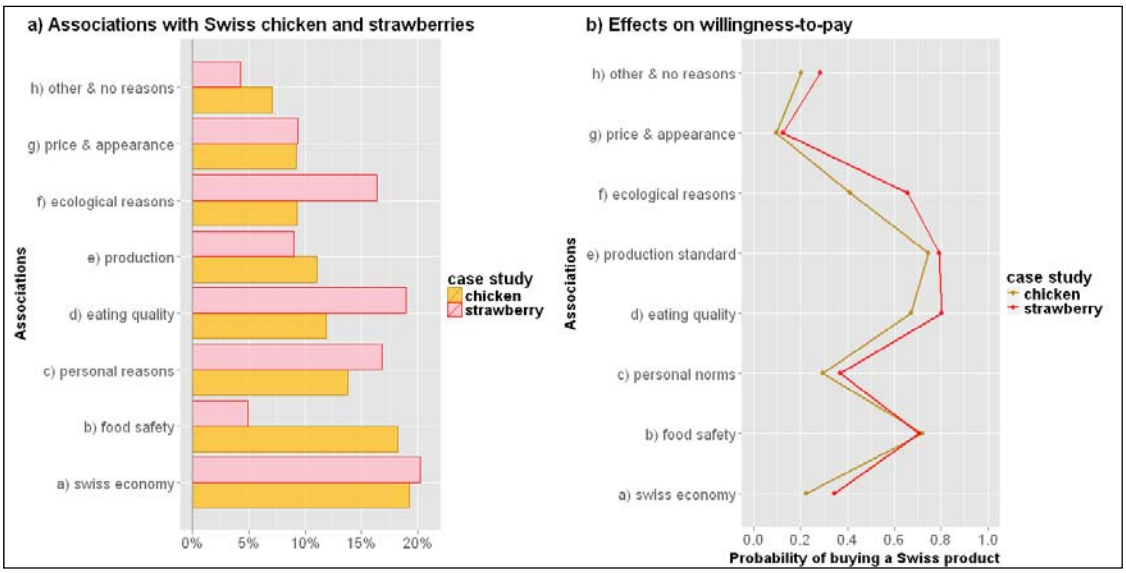

Fig. 1: a) Associations given spontaneously to explain preferred Swiss origin
b) Effects on the probability to choose the Swiss alternative

But what effect do these categories have on consumers' WTP? As outlined in the section "literature and hypothesis" above, we hypothesize that the more the preference for the domestic origin is associated with cognitive cues the more likely is the presence of a positive WTP for that product origin. Estimation results concerning the factors affecting WTP are presented in table 2. In the strawberry case, product safety is included in product quality because this category was not mentioned frequent enough. This is also the fact for ecological motive in the chicken meat case, so we introduced these responses in production standard. As hypothesised, associations which represent a cognitive cue such as product quality are more likely to have a positive impact on the WTP for Swiss origin. On the other hand, respondents whose association is dominated by economic motive such as the support of Swiss agriculture are less likely to pay a premium for Swiss products.

Table 3: WTP mean estimates: CHICKEN & STRAWBERRY CASE				
	CHICKEN CASE		STRAWBERRY CASE	
	WTP estimates	95% confidence intervals [a]	WTP estimates	95% confidence intervals [a]
entire sample	8.34 CHF/kg	6.93 – 9.59	2.70 CHF/500g	
eating quality	12.93 CHF/kg		5.48 CHF/500g	
ecological reasons	8.28 CHF/kg		4.06 CHF/500g	
food safety	14.77 CHF/kg		4.24 CHF/500g	
production	17.77 CHF/kg		5.54 CHF/500g	
swiss economy	5.14 CHF/kg		1.57 CHF/500g	
personnel motives	5.00 CHF/kg		1.64 CHF/500g	
no or other reasons	4.38 CHF/kg		1.48 CHF/500g	
price & appearance	-2.37 CHF/kg		-1.55 CHF/500g	
[a] Confidence intervals were obtained by stratified nonparametric bootstrapping				

VIII. CONCLUSION

For Swiss consumers Swiss origin is a very relevant product attribute in the evaluation process of food. The Swiss product origin is associated with a higher product quality, better food safety, and an excess of ecological standard. Besides, consumption of domestic agricultural products suggests the support of Swiss economy in general and agriculture in particular. These findings are in line with other . Food of the own country or own region is generally associated with

We found that cognitive cues such food quality and food safety reasons are more likely to generate a higher WTP for a products' COO. In this case COO acts as extrinsic cue and is considered as a signal for better quality and food safety. In this particular case, Swiss origin has the same effect like a brand which leads throughout a certain brand promise to greater consumer trust and a higher WTP.

For agribusiness and marketers these insights open up potentials when developing strategic marketing and communication purposes when using COO-Labels.

REFERENCES

Ahmed Z., Johnson J.P., Yang X., Fatt C.K., Teng H.S., Boon L.C. (2004): Does country of origin matter for low-involvement products? *International Marketing Review* 21 (1): 102-120.

Botschen G., Hemettsberger A. (1998): Diagnosing means-end structures to determine the degree of potential marketing program standardization. *Journal of Business Research* 42: 151-159.

Fournier D. (1998): Consumers and their brands: Developing relationship theory in consumer research. *Journal of Consumer Research* 24 (2): 343-373.

Hong S.T., Wyer Jr. R.S. (1989): Effects of COO and product-attribute information on product evaluation: An information process perspective. *Journal of Consumer Research* 16 (1): 175-187.

Isen A.M. (1984): Toward understanding the role of affect in cognition. In: Wyer Jr., R.S., Srull T.K., *Handbook of social cognition* (1), Hillsdale, NJ: Erlbaum.

Lefkoff-Hagius R., Mason C.H. (1993): Characteristic, beneficial, and image attributes in consumer judgements of similarity and preferences. *Journal of Consumer Research* 20 (1): 100-110.

Li W.-K., Wyer Jr. R.S. (1994): The role of COO in product evaluation: Informational and standard-of-comparison effects. Journal of Consumer Psychology 3: 187-221.

Loureiro M.L., McClustkey J.J., Mittelhammer R.C. (2002) Will consumer pay a premium for eco-labeled apples? *The Journal of Consumer Affairs* 36 (2): 203-219.

Loureiro, M.L., and W.J. Umberger (2003): Estimating consumer willingness to pay for country-of-origin labeling. Journal of Agricultural and Resource Economics 28 (2), 287-301.

Loureiro, M.L., and W.J. Umberger (2005): Assessing consumer preferences for country-of-origin labeling. Journal of Agricultural and Applied Economics 37 (1), 49-64.

Loureiro, M.L., and W.J. Umberger (2007): A choice Experiment model of beef: What US consumer responses tell us about relative preferences for food safety, country-of-origin labeling and traceability. Food Policy 32, 496-514.

Luomala, H.T. (2007): Exploring the role of food origin as a source of meanings for consumers and as a determinant of consumers' actual food choices. Journal of Business Research 60: 122-129.

Lusk, J.L., J.A. Fox, T.C. Schroeder, J. Mintert, and M. Kochmariaie (2001): In-store valuation of steak tenderness. *American Journal of Agricultural Economics* 83 (3): 539-550.

Maheswaran D. (1994): COO as a stereotype: effects of consumer expertise and attribute strength on product evaluation. *Journal of Consumer Research* 21 (2): 354-65.

Obermiller C., Spangenberg E. (1989): Exploring the effects of country-of-origin labels: information processing framework. Advances in Consumer Research 16: 454-459.

Orth R.U., Fibrasová Z. (2003). The role of consumer ethnocentrism in food product evaluation. *Agribusiness* 19 (2): 137-153.

Verlegh P., Steenkamp J.B. (1999): A review and meta-analysis of country-of-origin research. *Journal of Economic Psychology* 20 (5): 521-546.

Wagner R. (2000): Monetäre Umweltbewertung mit der Contingent Valuation Methode. Europäische Hochschulschriften, Reihe V, Volks- und Betriebswirtschaft, Bd./Vol. 2611. Peter Lang, Frankfurt am Main.