Title: The Importance of Personal Norms for Purchasing Organic Milk

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The Importance of Personal Norms for Purchasing Organic Milk

1 Abstract

1.1 Purpose

The aim of the study is to apply a structured approach to understand the importance of personal ecological norms in purchasing organic food. The norm-activation-model by Schwartz (1977) is used to predict self reported and observed purchase behaviour of organic milk.

1.2 Methodology

This paper reports the results of a field study with 63 customers of a German supermarket. A combination of covert observation and in store interview was applied to get reliable data on actual shopping behaviour and its predictors.

1.3 Findings

The results show that the self reported and the observed purchase of organic milk is predicted by personal ecological norms, social norms, and perceived behavioural control. Personal norms are activated by awareness of need, awareness of consequences, perceived behavioural control, and social norms. People with strong personal norms use "organic production", the "EU-BIO-Label" and "ingredients" as *additional* criteria during their decision process. For people with strong ecological norms the price difference between organic and conventional milk, the lack of knowledge about organic milk, and convenience are less important constraints. Finally, people with strong personal norms react more sensitive to proposed norm centred interventions.

1.4 Practical implications

The study offers insight into the processes of motivating behaviour and can be therefore used to design intervention strategies. Suggestions are developed in the closing part of the paper.

1.5 Value

The study applies for the first time the norm-activation-model to the domain of purchasing organic milk and underlines the importance of normative influences for this decision.

Keywords: Green Consumerism, Personal Ecological Norms, Milk, Barriers, Decision Criteria, Norm-Activation Model.

Categorization: Research paper

2 Theoretical Background

Although there is a rapidly growing market for organic food in the European countries the potential seems still much larger (Bonny, 2006). People who occasionally buy organic food in supermarkets and not committed consumers of organic food have become the preferred target group of marketing measures lately because the growth potential for committed costumers of health food stores seems to be small (Spiller et al., 2004). Understanding their motivations to buy organic food is essential to develop the market.

2.1 Factors influencing purchase of organic food

There has been extensive research on *motivations* of consumers to buy organic food. Magnusson et al. (2001) report the results of a survey of Swedish consumers upon their motivation to buy organic food and point out that better taste was the most important motive. McEachern and McClean (2002) surveyed Scottish consumers and confirmed that a positive impact on health, better taste and higher food safety seem more important motives to buy organic food than ethical motivations (protecting nature, saving animals). The EU market survey of the Centre for the Promotion of Imports from Developing Countries (CBI, 2005) also identified "food safety and health" as the most important motive to buy organic food in the European countries followed by nature conservation and better taste. Schäfer (2002) argued based on a survey of 700 consumers of organic food that the motives health and food safety are important when people start to become consumers of organic food but altruistic motives are important to stabilize a high level of organic food purchase. Thøgersen and Ölander (2006) show that environmental concern and environmental values explain that people buy organic food.

Von Alvensleben and Bruhn (2001) and Bruhn (2002) identified mayor obstacles to buy organic food: limited availability of organic food, higher prices than conventional food, and doubts about authenticity of organic products. Hughner et al. (2007) present an extensive analysis of the literature on purchase of organic food and identify 15 main themes in the 33 analysed studies, nine of them purchasing motives (health and nutritional concern, superior taste, concern for the environment, food safety, concern on animal welfare, support of local economy, more wholesome approach of organic food, nostalgia, and fashionable/curiosity) and six deterrents (high prices, lack of availability, skepticism of organic labels, insufficient marketing, satisfaction with current food source and sensory defects).

2.2 Psychological models to explain purchase of organic food

Although the body of literature on motivations to buy organic food is large and only a selection has been reported in the preceding paragraphs, studies that analyse the purchase *process* in more depth from a psychological perspective are rare (see also McEachern & McClean, 2002 for this discussion). As one of the few Sonnenmoser (1997) used the very successful social psychological Theory of Planned Behaviour by Ajzen (1991) to explain a combination of different consumer's actions in the domain of shopping. She was able to explain up to 72% of variation in an *aggregated* index of self reported environmentally friendly shopping behaviour including different aspects (e.g., organic food, waste prevention, etc.) with a modified version of the Theory of Planned Behaviour in which she included an additional direct influence of social norms on behaviour. The ZMP (Zentrale Markt- und Preisstelle – Central market and price agency, 2002) published a study about the "psychology of consumer decisions" in the

area of organic food and replicated the finding that the Theory of Planned Behaviour is applicable to the domain of organic food purchase. They were able to explain 39% of variation in food purchase by the variables of the Theory of Planned Behaviour. The explained variation is lower than in Sonnenmoser's study (1997) because she used an aggregated behaviour measure and ZMP used only organic food purchase as dependent variable.

2.3 The Norm-Activation-Model as an approach to understand organic food purchase

Although the Theory of Planned Behaviour is very successful in many domains of behaviour it lacks the moral or normative perspective as it reduces the moral or normative influence to *social* norms (hence expectations of others). The Norm-Activation Model (Schwartz and Howard, 1981) has a different focus as it explicitly considers personal norms as the driving force behind decisions in morally charged situations. According to the model (see Figure 1) behaviour ("buying organic food") is guided mainly by an activated *Personal Norm* (PN). This activated personal norm is experienced as a feeling of moral obligation to act in accordance with your own value system. Personal norms are activated by an Awareness of Need (AN: the feeling that action is necessary to prevent a negative outcome for nature) and an Awareness of Consequences (AC: awareness that the actor's actions affect nature in a positive or negative way). Furthermore, the model proposes that personal norms are not only activated by awareness of need and awareness of consequences but also influenced by the expectations of relevant other people (*Social Norms*, SN) and by the *Perceived Behavioural Control* (PBC). Social norm subsumes the social influence or pressure on

the development and activation of personal norms, perceived behavioural control takes into account that sometimes actions are not under the total control of an individual but are controlled by situational constraints. Both, social norms and perceived behavioural control are furthermore assumed to have an additional direct influence on behaviour parallel to personal norms although the influence of social norms is usually weak (Klöckner & Matthies, 2004; Bamberg et al., 2007).

- Insert Figure 1 about here -

The Norm-Activation Model states that personal norms, which are a reference to the personal value system, are responsible for acting morally. This makes the Norm-Activation-Model especially valuable to analyse behavioural situations that have a highly normative character like helping other people, animals, or protecting the environment. Furthermore, it describes the mechanism that activates norms in a given situation, another contrast to the Theory of Planned Behaviour. Referring to the influence of social norms and perceived behavioural control the two theories are similar. Hunecke et al. (2001) used the Norm-Activation-Model to explain household energy use and environmentally friendly travel mode choice. They were able to show that personal norms are an important predictor of conservationist behaviour. Many other authors successfully applied the Norm-Activation-Model to environmentally friendly behaviour in different domains (e.g. Stern & Dietz, 1994; Thøgersen & Ölander, 2003).

To apply a model like the Norm-Activation-Model to the purchase of organic food seems interesting because of the ongoing debate about the role of moral norms or values in motivating purchase behaviour. Whereas some authors point out the minor

influence of morality compared to motives such as health, taste, or food safety (e.g. McEachern & McClean, 2002; Magnusson et al., 2001) others argue with that. Schäfer (2002) for example identified altruistic motives to be important for transferring occasional customers into committed customers. Torjusen et al. (2001) propose that "reflection traits" (concerns about ethical, environmental and health issues) make the difference between Norwegian people who purchase organic food and people who do not since both groups equally valued "observation traits" (freshness, taste). Baker et al. (2002) identified underlying values of organic food choice and were able to show that the altruistic values "responsibility for other creatures" and "belief in nature" have some importance in the German sample they analyzed but not in the UK sample. Taken together it seems reasonable to assume that moral or normative aspects have an impact on purchase decisions in the domain of organic food. However, psychological models are needed that explain the mechanism behind the influence of values and norms on the actual purchase decision in the store.

3 Objectives of the Paper

The aim of the present study is to get a better, more structured, and theory based understanding of the psychological processes that link environmental norms to the purchase decision concerning organic food in the supermarket among occasional buyers of organic food. It is tested if the well established psychological Norm-Activation-Model (Schwartz & Howard, 1981) is capable of explaining a substantial proportion of variation in the specific shopping behaviour for one of the key products in the organic food market: milk. The study aims to analyse the group of supermarket customers from a norm centred perspective and to identify the changes in the perception

of product criteria and barriers that an established pro-environmental norm causes. Milk as target product was chosen because dairy products were on second place among the most popular organic products in the United Kingdom with regards to market share (Hill & Lynchehaun, 2002) and milk is the product most often named when McEachern and McClean (2002) asked participants of their study in Scotland what kind of organic dairy products they buy. Furthermore, Spiller et al. (2004) identified milk as one of the key products that especially occasional consumers of organic food buy.

4 Hypotheses

This study has two different types of hypotheses: the first type relates to the application of the Norm-Activation-Model to purchase of organic milk. We expect that according to the Norm-Activation-Model there is a significant influence of personal norms on purchase behaviour. Furthermore, perceived behavioural control and social norms should have a weaker but independent direct influence. Awareness of need, awareness of consequences, social norms, and perceived behavioural control should be positively related to personal norms.

The second set of hypotheses relates to the impact a strong personal ecological norm has on the evaluation of product criteria: Based on Bruhn (2002), Hughner et al. (2007) and the considerations of Birner et al. (2001) we selected a list of 12 probably important decisional criteria and 11 probably important constraints that interfere with buying organic milk (see Table 1). We expect that most characteristics are considered equally important by customers with weak and strong personal ecological norms (see Torjusen et al., 2001) but customers with strong ecological norms should consider selected characteristics more important (“organic production”, “EU-Bio-label”,

"ingredients", "local production", "recyclability of container", and "reusable container"). We furthermore expected customers with strong ecological norms to be less sensitive to higher prices and to lack of knowledge about organic milk.

- Insert Table 1 about here -

Finally, we expected people with strong personal ecological norms to generally be more positive towards proposed intervention measures to foster the sales of organic milk, especially towards norm related measures such as "strengthen the support by other people" or "improve the image of organic milk".

5 Method

5.1 Sample and Design

The study was conducted on eight days in spring 2007 as combination of a hidden observation of overt shopping behaviour and a subsequent face-to-face interview in a supermarket in Landau (Germany). Eight days of behaviour observation and interviews were selected at random over a period of two months. Five normal weekdays (Monday to Thursday), one Friday, and two Saturdays were included in the data collection. To recruit the interviewees the interviewer waited for customers to put milk into their shopping carts without attracting attention. After the interviewer noted the brand of the chosen milk she approached the customer and conducted a short interview on the process behind the decision for this particular brand. More than four out of five addressed customers declared their willingness to participate. 63 Interviews were conducted (5-11 on each of the eight days), of which were 43 with female and 20 with

male customers. This proportion of male and female participants is typical for a study of consumer behaviour in the domain of shopping daily needs (see e.g. Sonnenmoser, 1997). The interviewees were between 21 and 87 years old with a mean age of *M*=41.1 years (*SD*=16.5).

5.2 Measurement of the constructs

During the interview awareness of need, awareness of consequences, social norms, perceived behavioural control, and personal norms were each recorded with one item specified for shopping of organic milk (for wording of the items see the appendix). To keep the questionnaire as short and therefore the participation rate as high as possible it was decided against a multi item operationalization of the constructs. To achieve the best possible quality the items with the highest factor loadings for each construct were selected from previous studies on the Norm-Activation-Model (e.g., Klöckner & Matthies, in press) and adapted to purchase of milk. A small scale pilot study was conducted to confirm validity of the chosen items and practicability of the questionnaire. The items were answered on a five point scale (1=totally disagree; 5=totally agree). Additional to the recorded overt behaviour the interviewees were asked to self report their frequency of purchasing organically produced milk on a five point scale (1=never, 2=seldom, 3=sometimes, 4=often, 5=always). After that the interviewees were asked to rate the importance of the criteria for their decision on a certain brand of milk listed in column one of Table 1 (1=not important at all; 5=absolutely important). Afterwards, the interviewees were asked to evaluate if each factor listed in column two of Table 1 prevented them from buying organic milk (1= not at all, 5=totally). Finally, to evaluate approval of different intervention strategies to

foster the sales of organic milk the interviewees were asked if they support the named strategy in the particular statements listed in Table 6 (0=no, 1=yes).

6 Results

Two separate path analyses were calculated using the structural equation modelling tool AMOS (Arbuckle, 2005). The first path analysis used the proposed model structure of the Norm-Activation-Model (see fig. 1) to explain *self-reported* frequency of buying organic milk, the second path analysis tested the model on *observed purchase* of organic milk. Table 2 displays the variance-covariance-matrix used. Table 3 displays the results of both path analyses.

- Insert Table 2 and 3 about here -

Table 3 shows that the proposed model is explaining the data satisfyingly. Only the RMSEA of .155 is too high for a good fit of model 1 but all other indices indicate a good fit of predicted and empirical data. Therefore, we see the RMSEA of model 1 as not critical. However, these fit indices should not be overestimated as the analysed sample is small. In both models personal norms to buy organic milk are determined by the awareness of need, the awareness of consequences and by perceived behavioural control (significant for one sided testing). Contradictory to the hypotheses social norms have no significant influence on personal norms. Self reported frequency of buying organic milk is determined by personal norms, social norms and perceived behavioural control as was predicted by the Norm-Activation-Model. Observed buying of organic milk is also determined by personal and social norms (one sided testing) but not by

perceived behavioural control. The percentage of explained variation in observed behaviour is lower than in self reported behaviour.

For the following analyses the sample was dichotomized according to weak and strong personal ecological norms to buy organic milk using a median split procedure. 25 participants who answered the personal norm item with 1-3 where considered to have a weak personal norm and the remaining 38 participants (4-5 on the personal norm item) where considered as people with a strong personal norm. To analyse which aspects each group most prominently takes into account during the decisional process a series of analyses of variance (ANOVA) was calculated with the dichotomized personal norm as independent and the twelve possibly important aspects described in the method section as dependent variables (Figure 2 & Table 4). For both groups the fat content is the most important criterion. After that participants with a *weak personal norm* consider the expiration date, the recyclability of the container, the impact of the chosen milk on their own health, and the kind of container. Participants with a *strong personal norm* also consider fat content, recyclability, and their own health, but furthermore organic production and the EU-label for organic products on the container among the five most important aspects. Table 4 shows that participants with a strong personal norm score significantly higher on the importance of organic production, the EU-label on the container, and the ingredients.

- Insert Table 4 and Figure 2 about here -

For the next analysis the same approach was taken for behavioural constraints (Table 5 & Figure 3). Higher prices for organic milk, a lack of knowledge about the

differences between ecological and conventional milk, a lack of general knowledge about organic milk, a lack of trust in organic products, and matters of convenience are the most important behavioural constraints that prevent customers with weak ecological norms from buying organic milk. Four of these five constraints are also the most important constraints for people with strong ecological norms. However, the power of these constraints is significantly lower for the price and the lack of knowledge about the difference between organic and conventional milk. Convenience is also less important (one sided testing).

- Insert Table 5 and Figure 3 about here -

The average acceptance of nine proposed interventions was compared for participants with weak and strong personal norms (Table 6 & Figure 4). The highest rates of acceptance receive political interventions like subsidies for organically producing farmers. Customers with weak ecological norms show also high acceptance for measures like placing organic and conventional milk side by side on the shelf, lowering the price, giving more information on organic products, and broaden the choice of organic milk. Advertisement, the image of the product, support by relevant others, more information on organic milk, and a variety of different brands of milk are more accepted by customers with strong ecological norms.

- Insert Table 6 and Figure 4 about here -

7 Discussion

Both self reported and observed purchase behaviour are predicted reasonably by Norm-Activation-Model predictors, with the higher percentage of explained variation as expected for self reported behaviour. However, even almost a third of variation in observed behaviour is explained by the model constructs. This underlines the importance of moral motives for the purchase of organic food and supports the aforementioned work by Schäfer, Torjusen and colleagues, and Honkanen and colleagues (Schäfer, 2002; Torjusen et al., 2001; Honkanen et al., 2006). Most of the suggested model paths proved significant during the analyses with some interesting exceptions: There is no significant influence of social norms on personal norms. This could either be an effect of the low statistical power due to the small sample size compared to the expected effect size or indicate that there are no salient social norms in the domain of shopping organic milk that are internalized into personal norms. As we see no reason why the later should be the case – social norms have an impact on behaviour – we prefer to accept the first explanation. However, the fact remains that we would have expected the influence of social norms on personal norms to be stronger as studies of behaviour in other domains show medium effect sizes (e.g., Hunecke et al., 2001, in the domain of travel mode choice). It could be possible that personal norms in the domain of food purchase deviate more strongly from social norms because food related personal norms develop more independent from the social setting. The second important deviation from the model prediction is the missing significant relation between perceived behavioural control and observed shopping behaviour in model 2. This makes sense from a theoretical point of view as behaviour was observed in one very specific situation with a very specific set of behavioural opportunities and

restrictions which is similar for all surveyed customers. Therefore, perceived behavioural control which was measured on a slightly more general level (buying organic milk in general) should be not as strongly correlated to behaviour in a specific situation (buying organic milk at that day in this particular shop). However, perceived behavioural control should be related to the more general self report measure of purchase behaviour which it actually is.

People with a strong personal norm show a different pattern of decisional criteria they take into account. This result underlines our hypothesis that strong ecological norms are translated into action by making selection criteria related to organic production more salient. Against our expectations customers with a strong personal norm do not score higher on the items measuring the reusability or recyclability of the container and the distance of transport. This may be due to the fact that no local organic milk was available and that customers in this supermarket have no choice in what kind of container they want to buy organic milk.

There is almost the same pattern with the behavioural barriers: all but three aspects are not evaluated differently by customers with strong personal norms. However, a higher price for organic milk is a much less important constraint for customers with strong personal norms (although it is still the most important!). They also seem to feel better informed about the differences between organic and conventional milk. Finally, it seems that convenience is a less important constraint for people with strong norms. Taking differences in importance of decisional criteria and behavioural constraints together people with a strong and activated personal norm *additionally* focus on organic production (indicated by the EU-label) during the decision

and cope with the higher prices of organic milk by reducing the importance of that aspect.

However, not only during the decisional process customers with strong ecological norms show differences but also when asked about possible interventions that would increase the sale of organic milk. This underlines the norm orientation these customers show: they seem to be more sensitive to norm related interventions such as social support or creating an image of a product. Furthermore, they are a little more positive about more information on organic products and on broadening the choice of organic milk.

8 Practical implications

The results show that moral considerations can be a powerful force that makes people buy organic food and that the norm activation process can be described well by the norm-activation-model. The Norm-Activation-Model offers several levers to change behaviour of people: first, increasing awareness of need by distributing information focussing on the relation between style of consumption and ecological impacts. However, the second step is at least as important: increasing awareness of consequences by displaying the positive effect of possible actions as detailed as possible (e.g. "buying this bottle of milk equals saving X m^2 of soil from being polluted by chemical fertilizers"). Both aspects should increase the likelihood that personal norms become activated- Perceived behavioural control can be increased by very simple measures in the store: organic milk can be made more available, more visible, it can be made more convenient to buy (e.g. by positioning it at very exposed spots), and a reduction of the

price difference between organic and conventional milk would also increase perceived behavioural control.

Furthermore, the study shows that people with weak and strong ecological norms react differently to proposed interventions. Some people seem more sensitive to norm centred interventions like increased support or an image campaign than others. Interventions should be very carefully tailored to the target group to save costs or prevent negative responses. Identifying people with weak and strong ecological norms might be a way of detecting different target groups for proposed interventions.

From a theoretical point of view the results are interesting because they show that moral aspects can be triggered in a purchase decision. For future research it is interesting to analyse what circumstances contribute to activate a normative goal frame. Understanding this activation procedure more deeply would offer possibilities to frame customers in different ways.

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9 Appendix

Items used to measure the constructs of the Norm-Activation-Model

Awareness of need (AN):

The production of conventional milk is a serious problem for protection of the environment.

Awareness of consequences (AC):

If I decide to buy conventional milk, I contribute to the impairment of people, animals, and nature.

Subjective Norms (SN):

People who are important to me expect that I buy organic milk.

Perceived behavioural control (PBC):

Buying organic instead of conventional milk would be possible for me.

Personal norm (PN):

My personal values tell me that it is right to buy milk with the organic food label.

Behaviour (BEH):

How often do you buy organic milk? (self report)

Table 1: Possibly Important Decisional Criteria and Constraints to Purchase of Organic Milk.

Decisional Criteria	Constraints
1) price	1) higher prices of organic milk
2) expiration date	2) better taste of conventional milk
3) own health	3) lack of knowledge about differences between organic and conventional milk
4) fat content	4) general lack of knowledge about organic milk
5) ingredients	5) lack of trust in organic products
6) organic production	6) lack of knowledge about ecological impact of long distance transport of milk
7) EU-„BIO“-Label (label for organic food)	7) convenience
8) distance of transport / local production	8) habituation to one brand of milk
9) reusable vs. one-way container	9) time pressure while shopping
10) recyclability of container	10) better design of containers of conventional milk
11) design of container	11) lack of acceptance by friends and family
12) expectations of significant others	

Table 2: Variance/Covariance-Matrix used for the Analysis (numbers above the diagonal are covariances, numbers below the diagonal are Pearson correlations, numbers on the diagonal are variances; *N*=63)

	AN	AC	SN	PBC	PN	BEH(SR)	BEH(OB)
AN	2.007	.663	.414	.077	.867	.835	.215
AC	.382**	1.504	.516	.300	.800	.927	.218
SN	.232	.334**	1.567	.079	.466	.710	.181
PBC	.052	.234	.060	1.092	.415	.641	.112
PN	.402**	.429***	.243	.261*	2.318	1.399	.370
BEH(SR)	.385**	.494***	.369**	.401**	.601***	2.340	.516
BEH(OB)	.313*	.366**	.296*	.221	.501***	.696***	.236

* p<.05; ** p<.01; *** p<.001 (single sided testing); (SR)=self report; (OB)=observed

Table 3: Results of the path analyses of Norm-Activation-Model models to explain self reported and observed buying of organic milk and observed buying of locally produced milk (*N*=63).

	Model 1: organic milk/self report					Model 2: organic milk/observed				
	B	*SE*	*beta*	*p*	R^2	*B*	*SE*	*beta*	*p*	R^2
PN ← SN	.101	.138	.084	.466		.101	.138	.084	.466	

PN ← AN	.298	.126	.277	.018*		.298	.126	.277	.018*	
PN ← AC	.313	.154	.252	.042*		.313	.154	.252	.042*	
PN ← PBC	.265	.161	.182	.099†		.265	.161	.182	.099†	
PN					.287					.287
BEH ← SN	.288	.115	.237	.012*		.071	.042	.185	.093†	
BEH ← PN	.477	.098	.475	<.001***		.137	.036	.431	<.001***	
BEH ← PBC	.385	.139	.263	.006**		.045	.051	.098	.377	
BEH					.478					.292
Model fit	4.989	2	.083	.975	.959	1.644	2	.822	.991	1.000
RMSEA	.155					<.001				

† $p<.10$; * $p<.05$; ** $p<.01$; *** $p<.001$

Table 4: ANOVAs with Dichotomized Personal Norm as Independent and Importance of Decisional Criteria as Dependent Variables (*N*=63).

	F	*df*	*p*
fat content	.531	1, 62	.469
expiration date	1.195	1, 62	.279
recyclability of container	.424	1, 62	.518
own health	1.353	1, 62	.249
reusable vs. one way container	.134	1, 62	.716
price	.333	1, 62	.566
organic production	5.008	1, 62	.029 *
distance of transport	.004	1, 62	.949
ingredients	3.985	1, 62	.050 *
EU-"BIO"-label	19.305	1, 62	<.001 ***
design of the package	2.736	1, 62	.103
expectations of significant others	.240	1, 62	.626

* $p<.05$; ** $p<.01$; *** $p<.001$

Table 5: ANOVAs with Dichotomized Personal Norm as Independent and Importance of Behavioural Constraints as Dependent Variables (*N*=63).

	F	*df*	*p*
higher prices for organic milk	5.281	1, 62	.025 *
lack of knowledge about the *differences* between organic and conventional milk	4.226	1, 62	.044 *
lack of knowledge about organic milk	1.049	1, 62	.310
lack of trust in organic products	1.997	1, 62	.163
convenience	3.814	1, 62	.055 †
habituation to one brand	1.033	1, 62	.313
lack of knowledge about the ecological impact of long distance transport of milk	.030	1, 62	.864
better taste of conventional milk	.099	1, 62	.754
time pressure while shopping	1.701	1, 62	.197
better design of containers of conventional milk	.084	1, 62	.774
lack of acceptance by friends and family	1.204	1, 62	.277

† $p<.10$; * $p<.05$; ** $p<.01$; *** $p<.001$

Table 6: ANOVAs with Dichotomized Personal Norm as Independent and Acceptance of Proposed Interventions to Promote Organic Milk as Dependent Variables ("Do you agree with the following intervention strategy? yes, no"; *N*=63).

	F	*df*	*p*
political interventions like subsidies for organically producing farmers	.987	1, 62	.324
place organic and conventional milk side by side on the shelf	1.010	1, 62	.319
lower the price of organic milk	.024	1, 62	.878
more information on organic products and their credibility	3.258	1, 62	.076 †
broaden the choice of organic milk	3.529	1, 62	.076 †
more advertisement for organic products	13.438	1, 62	.001 **
a better image of ecological products like organic milk	8.451	1, 62	.005 **
bonus schemes / incentive plans	2.570	1, 62	.114
more support by significant others (e.g. friends, acquaintance, family)	5.155	1, 62	.027 *

† $p<.10$; * $p<.05$; ** $p<.01$; *** $p<.001$

Fig. 1: The proposed norm-activation model (adapted from Hunecke et al., 2001).

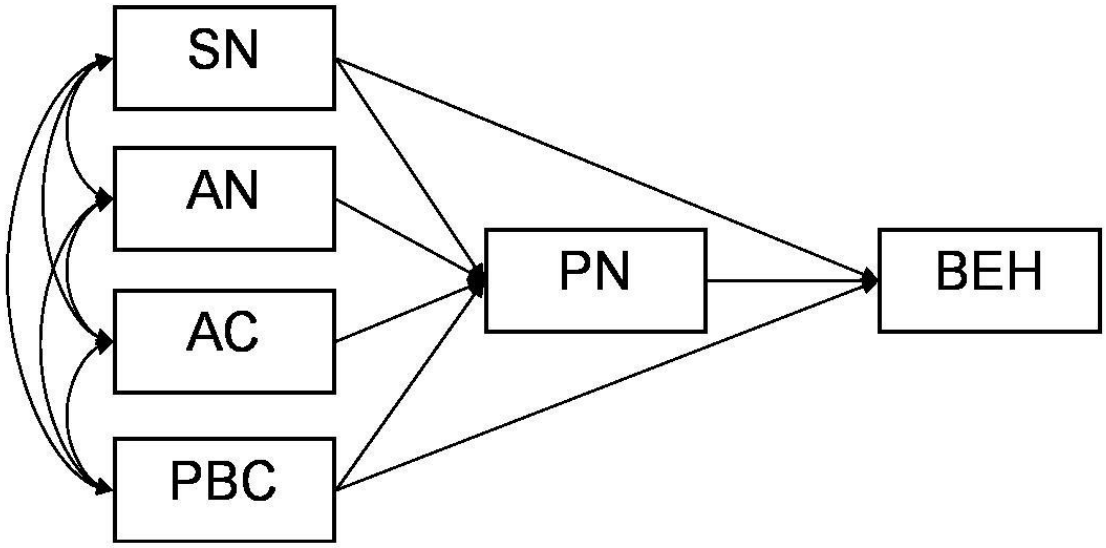

Fig. 2: Importance of decisional criteria for customers with weak and strong personal ecological norms (*N*=63). The bars report mean scores for the two subgroups, the error bars report standard errors.

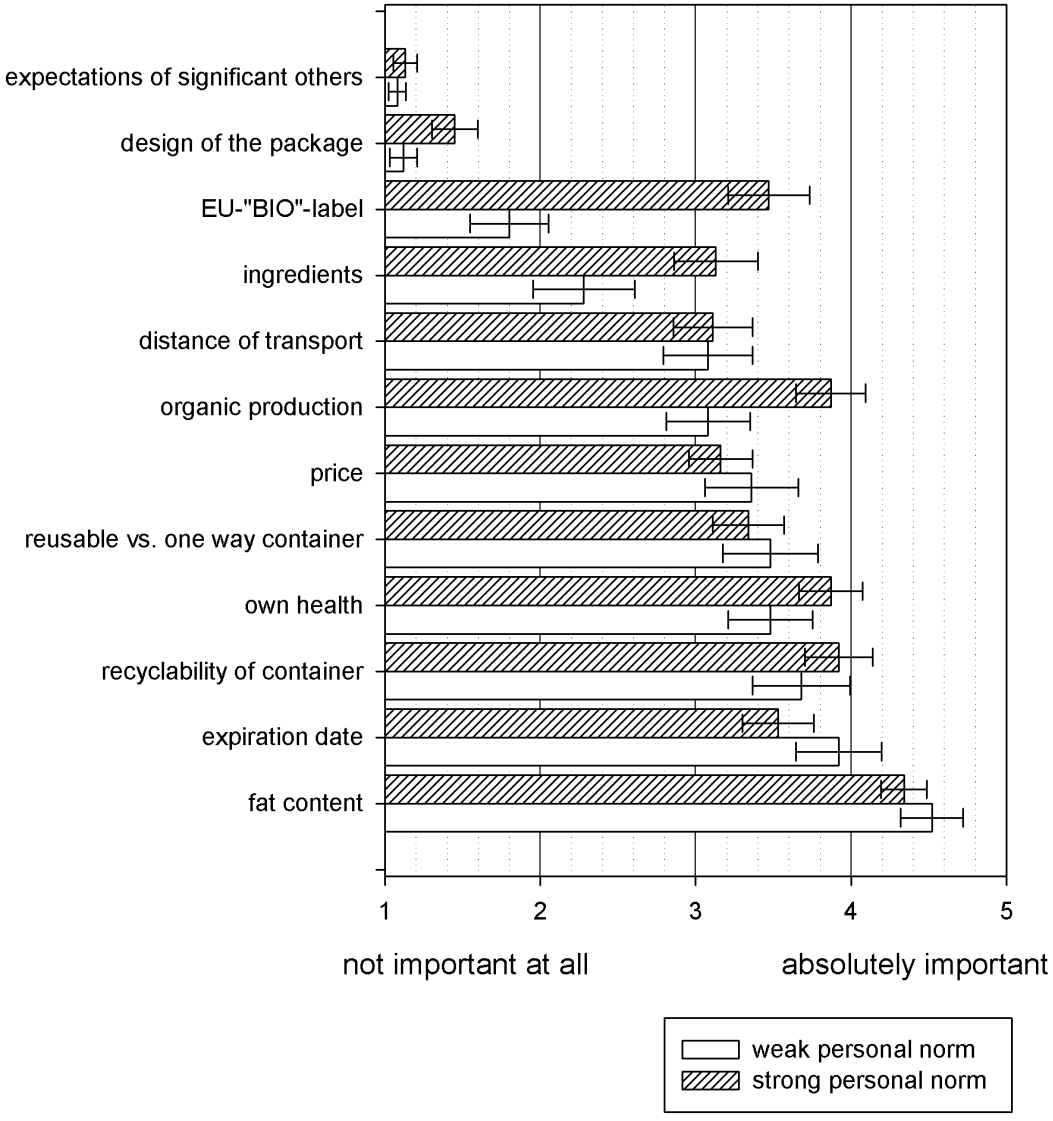

Fig. 3: Evaluation of behavioural constraints by customers with weak and strong personal ecological norms (*N*=63). The bars report mean scores for the two subgroups, the error bars report standard errors.

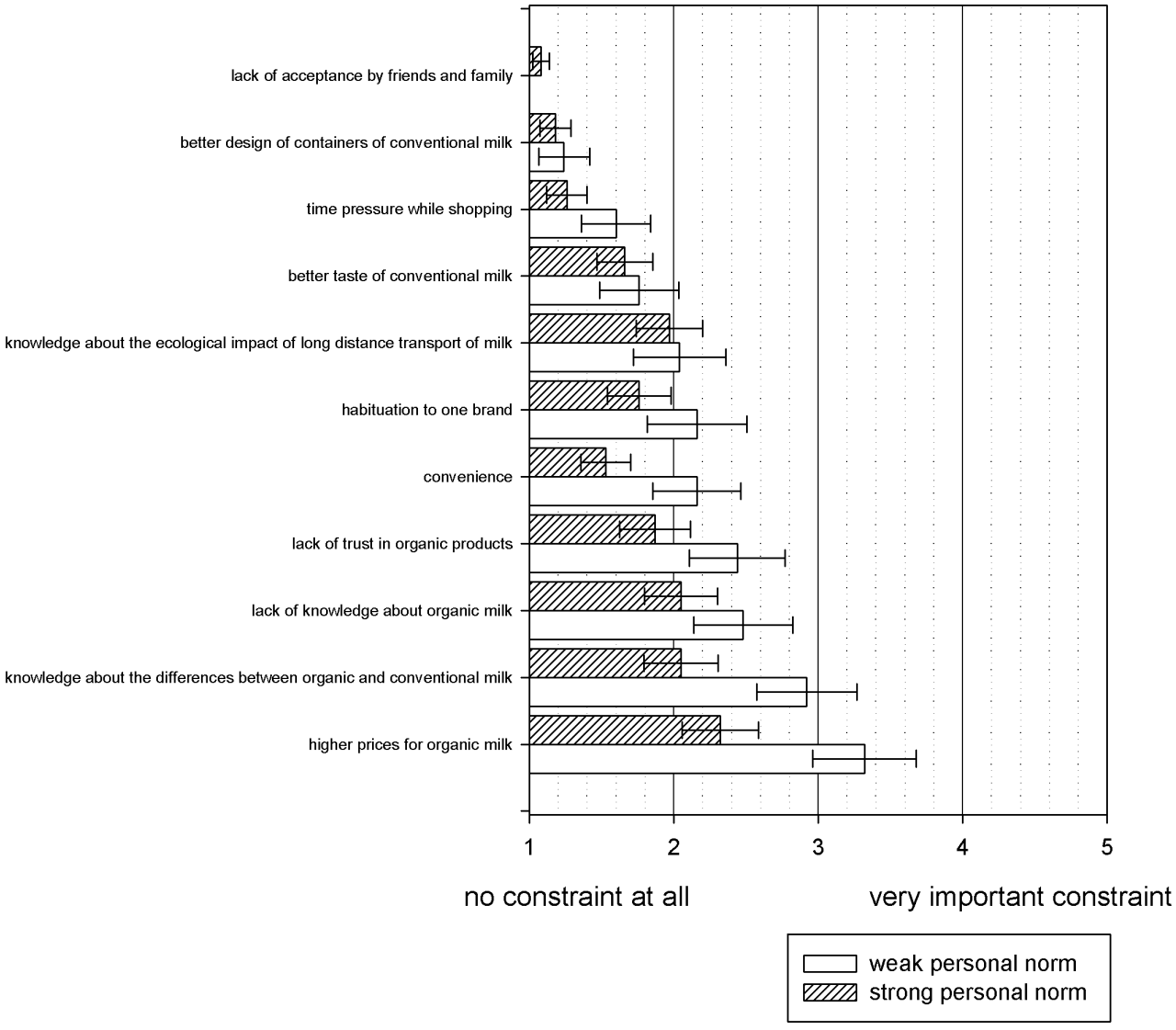

Fig. 4: Evaluation of proposed interventions by customers with weak and strong personal ecological norms (*N*=63). The bars report mean scores for the two subgroups, the error bars report standard errors.