Impacts from Region-of-Origin Labeling on Consumer Product Perception and Purchasing Intention – Causal Relationships in a TPB based Model

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Introduction

In recent years, regionality of food products has become an important criterion for consumers. Verbeke and Roosen (2009) found that a high share of consumers in Europe is willing to pay price premiums for food characterized as regionally produced. In Germany, origin of food was found to be relevant for approximately one-fifth of consumers (Profeta et al., 2012). To capture this market potential a large variety of regional labels has been introduced in Germany, ranging from small-scale producer cooperatives to large-scale retailer labels. This variety also reflects the scope between narrow geographical definitions for regionality labels that have the advantage of providing a consistent and credible regional image to consumers and wider geographical definitions of regionality labels that offer advantages due to economies of scale. Some German Federal States have established state regionality labels as means to support local food producers. However, North-Rhine Westphalia (NRW) which has the largest population[1] of all Federal States has not established a state-based label yet. Qualitative research with respect to NRW has argued that NRW due to the diversity of its sub-regions is not associated with a consistent image and thus, that labels for smaller sub regions are better suited to promote regional identification (Banik, et al., 2007). In order to better understand the effects from region-of-origin (RoO) labels in this context, the objective of this study was to model consumers' attitude and purchasing intention for food products from sub regions of NRW, more specifically from consumers' home region.

Theoretical Background

The model applied in this study relies on the Theory of Planned Behavior (TPB) which was introduced by Ajzen (1991) and has been widely applied to analyze consumers' purchase behavior with respect to (organic) food (e.g. Arvola et al., 2008). According to the TPB, consumer behavior can be predicted by the stated behavioral intention which itself is determined by three distinctive (additive) constructs: Cognitive Attitudes which evaluate the outcomes of behavior on a positive/negative scale, Subjective Norms which describe the expected evaluation of the behavior by relevant others, and Perceived Behavioral Control (PBC) which denotes how much influence a person feels to possess with respect to the exertion of the behavior. Furthermore, two extensions of the classical TPB were applied. First, Affective Attitudes as separate behavioral determinant from Cognitive Attitudes were included. Second, Personal Norms were included as mediator between Subjective Norms and Cognitive Attitudes which resolved the restrictive assumption of independence between normative and cognitive elements in TPB. In 1989, Obermiller and Spangenberg derived a theoretical framework for country-of-origin effects on consumer preferences addressing three processes (cognitive, affective and normative) which determine consumer preferences. Alvensleben (1999) assumes that evidence from country-of-origin studies is also valid for smaller-scale RoOs and applies the respective theoretical framework accordingly. In the following, the three processes are presented in detail and related to the framework of TPB.

Cognitive Processes: Based on product attribute perception, it is assumed that regionality as a product attribute may indirectly influence consumer preferences (van Ittersum et al., 2003). In the area of regional food products, specific product-related (freshness, good taste, nutritional quality) and production-related (environmentally and socially sustainable production, transparency) characteristics were derived that German consumers appear to connect to regional food (Hensche et al., 2007). This is considered in the construct of Cognitive Attitudes. Since the RoO represents a credence attribute which consumers cannot verify, the positive cognitive perception of regionality depends on the credibility of communicating the regional origin (van Ittersum et al., 2003). In this context, it was found to

[1] 17.8 million inhabitants in 2011, according to the German Federal Statistics Office: www.destatis.de

be important that a product is perceived as an authentic regional product by the consumer in order to be credible. Morris and Kirwan (2010) assume that high authenticity of a regional food product can be reached when a stated RoO matches perceptions about regional food products in the following ways: (a) it is associated with natural landscapes and rural idyll; (b) consumers have positive images about the food production in the region; (c) consumers are aware of environmental and social impacts of the food production and relate them to the region; (d) consumers think of situations in which the product is used relating to the region such as traditional cuisine. The model applied in this study accounts for the perceived, product-specific authenticity of a RoO by including an independent latent variable of Authenticity for the individual home region.

Affective Processes: Besides indirect cognitive evaluation, a country-of-origin statement was found to significantly change consumers' image of a product and their stated willingness to buy the respective good directly through emotional-associative effects. In comparison to cognitive processes, it has been suggested that affection has the potential to "override any [indirect] attribute-based evaluation" (Obermiller & Spangenberg, 1989:456). Accordingly, Affective Attitudes of liking and disliking a specific region are regarded essential for explaining consumer responses to regionally marketed products (von Alvensleben, 1999). Empirical findings show that German consumers have the most positive image about their 'home region', followed by well-known holiday destinations (Henseleit et al., 2007).

Normative Processes: An important element for consumer behavior with respect to regional products is the notion of home-bias. It describes the preference for locally or regionally produced food as means to support and differentiate ones home region from foreign regions (van Ittersum 2002). More general, this normative preference for regional products is based on the concept of ethnocentrism. It states that one tends to judge people or products originating from other regions "by the standards and practices of one's own culture or ethnic group" which leads to an "inherent feeling of superiority" (Frewer et al., 2001:290). In line with this, "consumers' sense of belonging [to a specific region] significantly enhances consumers' intention to purchase regional products" (van Ittersum, 2002:96). Personal Norms as elements of an extended TPB model were considered in line with these findings.

Interplay of Affective and Normative Processes: Affective and normative processes both have been related to consumers' definition of a 'home' by stating that 'home regions' are related to positive affective evaluations and to normative implications of purchasing regional products. At the very basic level, consumers' definition of home is assumed to refer to geographical places of birth and longer times of habitat. Cuba and Hummon (1993) suggest six determinants of place identity which finally determine if and how strong a person identifies him-/herself with the region he/she lives in: self-related (feeling home), family-related, friend-related, community-related, organization-related and dwelling-related. In order to represent the aspect of 'home' in consumer purchasing behavior of regional food in NRW, the element of Identification with the current region of habitat was included in the TPB model. It was assumed that Identification influences Personal Norms and Affective Attitudes of a consumer with respect to the purchase of regional products.

Method

Based on the presented literature, a behavioral model for the Purchasing Intention of regional food was derived. This model considered seven determinants: Cognitive Attitudes, Subjective Norms and PBC as classical TPB elements, Affective Attitudes and Personal Norms as extensions of TPB and finally perceived Authenticity and Identification as elements of RoO perception for food products. To empirically test the derived model, latent variables were set up for each construct as reflective measurement systems. It was necessary to restrict

the model to one exemplary product (Ajzen, 1991) and a specification of the region. Regarding the former, pork was chosen as exemplary product. Meat at low processing levels is usually not sold in visually designed, branded packaging in Germany. Moreover, pork is the type of meat with the highest per capita consumption in Germany[2]. Concerning the latter, past research has shown that consumers reveal a higher level of identification with sub regions of NRW than with NRW as a whole (Banik et al. 2007). Furthermore, different regions of NRW were found to be associated with different stereotypical beliefs that may determine their fit for authentically labeling pork as a regional product. We considered this by relying on a well-established set of 12 sub regions of NRW. Consumers were asked to refer in their responses to the sub region of NRW in which they currently live. To increase internal validity we restricted the shopping environment where pork is purchased to be a supermarket. An online survey questionnaire was developed, comprising of three main parts: The first part referred to respondents' knowledge, identification with and perceived image (in relation to pig production) of NRW and of the respective sub-region each respondent lives in. In the second part, participants were asked about their purchase behavior with respect to (regional) pork, focusing on their cognitive and affective attitude as well as their social and personal norms. Furthermore, perceived behavioral control and purchase intention were examined for regional pork. In the third part of the survey information on socio-demographics were requested from the participants. After conducting two pretests, the data was collected from a random sample of 503 respondents, drawn from an online consumer panel of German internet users during two weeks of October 2013. In line with the research objective, only those panel members were considered who live in NRW and buy meat products at least once per month. The online participation panel used a system of points to earn rewards in form of shopping vouchers.

Results

Preliminary to the estimation of the derived structural model, an exploratory and a confirmatory factor analysis were carried out to validate the suggested composition of latent variables. Thereby, an adjustment of the initial model was found reasonable: the suggested constructs Affective Attitudes and Personal Norms were merged in the final model (PN/AFF), given high correlation between the indicators of both systems. The combined construct was assumed to be determined by Identification and to have a direct effect on Purchasing Intention (see Figure 1). Moreover, it was assumed that the construct has an impact on Cognitive Attitudes and is influenced by Subjective Norms. Besides, all measurement systems for the latent variables were adjusted to the structure of measured indicators, presented in Table 1.

Table 1. Indicators for Measurement Systems in final Model

Cognitive Attitudes	PBC	PN / AFF	Authenticity	Identity	Purchasing Intention	Subjective Norms
pork from home region vs. other pork			**home region of NRW**		**pork from home region**	
more animal welfare, less additives, better taste	difficult to compare, takes additional effort, hard to identify	more content, positive feelings, be responsible	rural landscapes, agricultural production, pork breeding	feel home, important persons, positive image, center of life	take additional effort, try, plan in advance	others expect this, others support this

A confirmatory factor analysis revealed that all latent variables reach a composite reliability of at least 0.8. Moreover, the Fornell-Larcker criterion for discriminant validity revealed a sufficient differentiation among the measurement systems. Finally, the standardized regression weights between the latent variables were calculated for the revised structural model. All regression weights are significant at the 5% level and furthermore have the expected positive sign (see Figure 1).

[2] 53 kg in 2012, Bundesverband der deutschen Fleischwarenindustrie: http://www.bvdf.de/in_zahlen/tab_05/

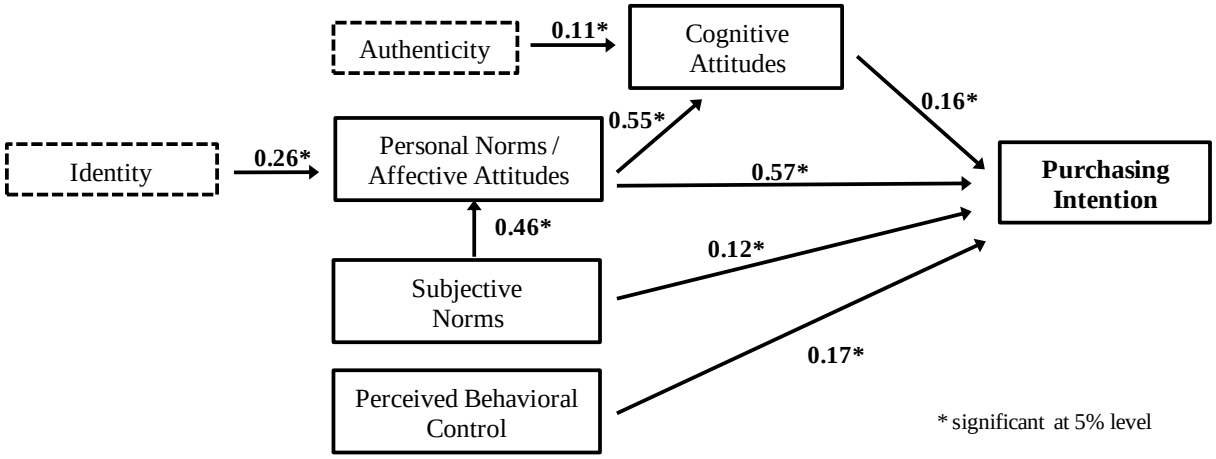

Figure 1. Standardized Regression Weights of the Structural Model.

To judge the model fit to the empirical data, different goodness-of fit criteria were calculated to provide a holistic perspective on the goodness of fit (Blunch, 2007): It appears that the estimated model fits the empirical data sufficiently, with an adjusted goodness-of-fit index of 0.919 and a rooted mean squared error of approximation of 0.045. Overall, the minimum discrepancy CMIN divided by degrees of freedom reveals sufficient model fit with 1.985. Therefore, the model provides (a) convergent and discriminant validity of latent variables and related measurement systems; (b) sufficient fit to empirical data; (c) parameter estimations in accordance to the theoretically implied relationships. Hence, our model was assumed to be an overall valid representation of consumers' purchase intention for pork from sub-regions of NRW. The relative relevance of the behavioral determinants can be identified by reviewing their standardized direct and indirect influence in the model. Regarding the direct influence (see Fig. 1), the merged construct PN/AFF shows by far the strongest impact (0.57) on consumers' purchase intention. The direct influence of PBC, Cognitive Attitudes, and Subjective Norms is considerably lower with values of 0.17, 0.16 and 0.12, respectively. Considering the indirect effects, Subjective Norms as well as Identity have a comparably strong impact (0.30 and 0.17) on Purchasing Intention by their influence on Personal Norms/ Affective Attitudes. Perceived Authenticity of a region in contrast has only a low, though significant, indirect influence on Purchasing Intention (0.02) through Cognitive Attitudes.

Discussion and Conclusion

The presented study provides insights with respect to the determinants for consumers to choose regional food products. The empirical results indicate that the purchase of regional pork in NRW is significantly determined by affective and normative elements. Apart from the relevance of those elements, Cognitive Attitudes were estimated as additional significant explanatory factors for consumers' Purchasing Intention and hence should not be neglected in regional marketing. Accordingly, characteristics of superior quality (taste, additives) need to be addressed. The results support the general assumption that the impact of credence attributes such as regionality on consumers purchase behavior occurs via both affective and cognitive evaluation (von Alvensleben 1999). Moreover, our analysis confirms that the identification with the RoO positively influences the affective and normative evaluation of regional food as has been previously suggested by various authors (Henseleit et al., 2007). Therefore, it may be argued that regional labels should refer to the scope of what consumers define as "home". As past qualitative research revealed that consumers in NRW mainly identify themselves with sub-regions of NRW, our results support the argument that sub-regions of NRW are more applicable for labeling regional food than the Federal State (Banik et al., 2007). Finally, the perceived authenticity of a labeled region with respect to the specific product was found to significantly influence Cognitive Attitudes. Therefore, the market

potential of regional products is higher for those products, where the regional image matches with the product under consideration. However, as the construct Authenticity of a RoO had by far the lowest impact on Purchasing Intention, our results challenge the claim that an authentic regional image ultimately decides about the value that consumers assign to the regional product (van Ittersum et al., 2003). At a more general level, the results of the study support the extension of the classical TPB considering the interaction norms and attitudes. Specifically the interactions between (personal and subjective) norms and (cognitive and affective) attitudes were supported in our model. With respect to normative elements, similar recommendations were derived by Arvola et al. (2008) for organic and by Vermeir and Verbeke (2008) for sustainable products. To generalize and validate the presented model as a framework for analyzing purchasing intention of regional products, further research is needed covering other products and regions. Furthermore, it would be desirable to investigate to what extent the 'intention to purchase a regional product' also leads to the actual purchase.

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