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Profeta, Adriano

Technical University of Munich, Chair of Environmental  
Economics

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# DISCUSSION PAPER

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Adriano Profeta

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and Agricultural Policy Group

**Contact address:** Adriano Profeta  
Technische Universität München  
Lehrstuhl für Volkswirtschaftslehre –  
Umweltökonomie und Agrarpolitik

Alte Akademie 14  
85350 Freising-Weihenstephan

phone: +49.8161.71.3593  
fax: +49.8161.71.3408  
email: [adriano.profeta@wzw.tum.de](mailto:adriano.profeta@wzw.tum.de)

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**Address:** Technische Universität München  
Lehrstuhl für Volkswirtschaftslehre –  
Umweltökonomie und Agrarpolitik

Alte Akademie 14  
85350 Freising-Weihenstephan

phone: +49.8161.71.3406  
fax: +49.8161.71.3408  
homepage: [www.wzw.tum.de/ap/](http://www.wzw.tum.de/ap/)

# **A Theoretical Framework for Country-of-Origin-Research in the Food sector**

## **Abstract**

The main advancement of the developed theoretical framework for Country-of-Origin (CO) research in this paper is the holistic consideration of CO in consumer choice that is missing in older works as for example made by ITTERSUM (2003) or JAFFE AND NEBENZAHL (2001). These and other researchers describe a lot of aspects of the CO effect separately and independent from each other without paying a lot attention to the interdependencies. Furthermore the offered model integrates new but important impact factors on the CO effect. The developed theoretical framework has to be tested empirical and therefore call for future CO research in the food sector.

Key words: Country-of-Origin, Food, Theoretical Model

## 1. Does CO matters and is there a need for a new theoretical framework?

After the appearance of the paper of LIEFELD (2004) the results of more than 700 Country-of-Origin studies, that often revealed a significant impact of origin on preference formation for products, seemed to be put into question. First and foremost it was criticized by him that many published studies are relying on obtrusive attitude measures of independent and dependent variables in non-purchase contexts. As consequence he concluded that these contain serious limitations as external validity and generalizability. Therefore he states that, “*None of the published CO[P] research reports what consumers do, when choosing between product alternatives.*”<sup>1</sup>

In order to underline his hypothesis of overestimation of CO LIEFELD (2004) conducted a survey in U.S.-supermarkets. The respondents were consumers which were asked directly behind the cash desk if they know the origin of the products they just bought. For the broad product category of non-food goods LIEFELD (2004) showed that only 8 % of the consumers leaving the cash register knew the CO of the product just purchased. And for only 33 % of these (2.6 % of the total N), correct awareness of the CO played a role in their choice between the available purchase alternatives. Additionally to his empirical study he adduced as evidence that the reality of the market place does not correspond with the findings and conclusions of academic researchers regarding the importance and role of CO in consumer choice. As example he referred to low-priced imports that flooded the American market and the shifting of production capacities to foreign countries.

Is CO-research in the light of these facts at its end as there is possibly no CO-impact under real market conditions? We would say no. In our opinion the results stated by LIEFELD (2004) are maybe true for the analyzed non-food sector and maybe for the American market or consumer but not for the food sector and especially the European consumer.

In Europe products labelled with CO have a great share at the total turnover with food (PROFETA AND BALLING 2006). And for a lot of these products the consumer is willing-to-pay a price premium (ARFINI, 2003). This is market reality too. Above all with REGULATION (EC) 510/06 the EU owns a special legislation in order to protect geographical indications in the food sector against misuse by producers that are outside a defined production area. No company would apply for a protection according to this regulation if it would not benefit e.g. in

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<sup>1</sup> That is not completely right. SATTLER (1991) applied a conjoint analysis for different food products (e.g. jam). The task for the respondents was to rank several product alternatives according to their preference.

terms of higher prices or increasing sales. For the year 2010 it is forecasted that the number of protected geographical indications in the food sector will exceed the 1.000. Additionally to the described market reality in Europe PROFETA (2006) and PROFETA ET AL. (2007) conducted empirical studies in Germany using more sophisticated quantitative and thus more market realistic methods that confirmed the importance of CO in consumer choice in the food sector.<sup>2</sup> Nevertheless we agree with LIEFELD (2004) that more sophisticated quantitative methods of market research have to be applied in order to increase realism of market research.

Supporting the hypothesis that CO matters at least in the food sector, it makes sense to glance at CO-theory. Besides the lacking methodology a main problem in CO-research is the missing holistic consideration of CO in consumer choice. Up to now theoretical and empirical studies describe a lot of aspects of the CO effect separately and independent from each other without paying a lot of attention to the interdependencies. Therefore there is a great need to develop a CO model that integrates all relevant variables and puts them in context with each other. Additionally this model has to be more sophisticated as the model proposed by JAFFE AND NEBENZAHL (2001).

This task shall be accomplished by this paper. Step by step on the basis of empirical research results and the theoretical approaches of SHET ET AL. (1991), OBERMILLER AND SPANGENBERG (1989), ITTERSUM (2001) and several other researchers a model is developed that makes it even partly possible to reconcile divergent empirical results. At the beginning we start this challenge with consideration of the relation between CO and perceived value of a product.

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<sup>2</sup> It is to mention that PROFETA (2006) and PROFETA ET AL. (2007) used the discrete choice methodology for the estimation of impact of CO. This methodology allows collecting preference data by using buying experiments or controlled store experiments. In these experiments respondents had to choose between product alternatives. Thus this approach accomplishes the request of LIEFELD (2004) who stated that “*We must observe, classify and catalogue what consumers actually do, when, where and how they do it in the reality of marketplace.*” In future especially mixed logit offers the potential to combine stated and revealed preference data increasing the generalizability of empirical results (FRODE, 2004).

## 2. Country-of-Origin and the “perceived value” of a product

Many studies (GAEDEKE, 1973; ELLIOT AND CAMERON, 1994; EROGLU AND MACHLEIT, 1989; WHITE AND CUNDIFF, 1978) have shown that there is a strong correlation between the country of origin and the perception of quality of a product. Other authors, such as for example BECKER (2000) and VERLEGH AND STENKAMP (1999), have referred to the country of origin as a quality signal.

Despite its importance consumer research shows that perceived quality is not always the only decisive factor in purchase decision. So, for example, in a study carried out by Elliot and CAMERON (1994), Australians who were interviewed judged computers from the USA to be better than those from Australia, in terms of quality. When asked about the origin of a computer they would buy, they said, in contrast, that they would choose an Australian computer.

ZEITHAML (1985) gave further examples of situations in which consumer's buying decision is not determined solely by the perceived quality of a product. Therefore, the term perceived value was introduced by her as a better indicator. Based on an explorative consumer study, the following four definitions were given for this concept: “(1) value is low price, (2) value is whatever I want in a product, (3) value is the quality I get for the price I pay, and (4) value is what I get for what I give.”<sup>3</sup> Integrating these definitions of a term in a manner drawing together the diverse components ZEITHAML (1985) described perceived value as follows:

*„[...] perceived value is the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given. Though what is received varies across consumers (i.e., some may want volume, others high quality, still others convenience) and what is given varies (i.e. some are concerned only with money expended, others with time and effort), value represents a trade-off of the salient give and get components.”*

Perceived value, as is illustrated in figure 1, is substantially influenced by perceived quality. However, in addition, extrinsic<sup>4</sup> and intrinsic attributes act directly on this. Intrinsic attributes refer to the physical composition of a product. In the case of a drink, these could be, for example, the taste, the colour and the degree of sweetness. The intrinsic attributes cannot be changed without, at the same time, changing the nature of the product itself. Extrinsic attributes are product-related, but are not part of the product itself. They are, by definition, external

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<sup>3</sup> According to ZEITHAML (1988: 13) illustrated the diversity of the meaning of the term perceived value, and the difficulty in conceptualising and measuring this concept in research.

to the product. The price, the brand name, advertising, as well as also information about origin are examples of these (OLSON, 1977; BAUGHN AND YAPRAK, 1993; GABBOT, 1991; JOHANSSON, 1989; ZEITHAML, 1988)

Insert here figure 1

Extrinsic as well as also intrinsic product characteristics can, in accordance with the model illustrated in figure 1, have a twofold effect. Thus, for example, a higher price acts in a positive way on perceived value, a correlation effect (high price = high quality) which has been confirmed in many studies (LAMBERT, 1972; SHAPIRO, 1968). In contrast, the price can, however, also have a negative influence on the perceived value, as a consequence of definition (1). How strong, in turn, the negative effect of a price is probably depends on the level of the consumer's income. One may therefore assume that the price effect referred to is greater for those who are financially worse off.

As an example for both possible impact paths for intrinsic characteristics, the case is considered of the sugar content of lemonade. Sugar has a decisive effect on rounding off the taste of the refreshing drink, for which reason the sensory quality of a lemonade containing sugar is, as a rule, rated more highly than one containing sweetener (ENNEKING ET AL., 2006). In contrast, sugar in too great a quantity can result in an increase in weight and cause caries. Those who have a greater awareness of their health therefore ascribe greater value to lemonade containing a sweetener, which does not possess negative properties, than lemonade containing sugar, even though the latter, at the same time, is judged better by this group according to the taste (sensory quality) (ENNEKING ET AL., 2006).

In the last-mentioned example, the health awareness of the consumer is given as the factor influencing perceived value. The term can be assigned, according to ZEITHAML (1985), to the category of high-level abstractions. These are complex personal values such as, for example, the striving for patriotism, awareness of the environment, or the need for convenience. These can be activated as discussed by product characteristics that are called "lower-level attributes".

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<sup>4</sup> ZEITHAML (1988: 4) gave the price explicitly and therefore separately from other extrinsic characteristics as factors of influence on perceived value.



The two levels “high-level abstraction” and “lower-level attributes” can also be considered in the context of the means-end chain theory (MEC theory), which has gained increasing importance in recent literature on the subject of consumer behaviour. The modified MEC model of REYNOLDS AND GUTMANN (1988: 11) consists of three components or MEC levels: the product attributes, the consequences, as well as the value concepts (GUTMAN 1982: 60). According to this approach, product characteristics are judged on the basis of consequences which, in turn, are assessed with the aid of value concepts. Using the basic model, whilst at the same time making use of the work of TOLMAN (1932), the terminology of means-end chains can be deduced: product attributes and consequences can accordingly represent the means, which have the purpose of realising value concepts (“ends”). Following the definition of ZEITHAML (1985), the means in the MEC model can be equated with the already mentioned lower-level attributes and the ends with the high-level abstractions.

The means-end chain theory described above has already been used in CO research in the food sector. For example, KLIEBISCH (2000: 409) carried out an empirical study in which he was able to establish for the product category pomaceous fruit (apple) that, for a particular group of consumers, the origin as mean served the function of realising the (abstract) value concept responsibility. One component of this value concept was the aspect “supporting domestic farming or the regional economy”. Supported by the results of KLIEBISCH (2000), it was possible to show in a series of studies that, in particular, ethnocentricity plays an important role as an “end” in the perception of products with information about origin.

From the preceding account, it has been shown that “perceived value” represents a better indicator for consumers’ purchasing decisions than “perceived quality”, as the former construct takes into account other important behaviourally relevant factors of influence (see figure 3). But it should be noted, however, that ZEITHAML (1985) did not further differentiate the term perceived value.

Here, one can draw a link as proposed by ITTERSUM (2001) with the approach of SHETH ET AL. (1991), who stated that purchasing a product is a multidimensional phenomenon in which a number of values participate. So, these authors identified, on the basis of empirical studies, five sub-values according to which a product can show a functional, a social, a conditional, an emotional and an epistemic value. These values of a product will be described, in brief, in the following, in which a concrete example will be given for products with information about their origin.

### *Functional value*

Products have a functional value if they offer the consumer features that, for example, satisfy his or her needs for higher quality, good taste or health. If information about origin signals a high product quality or a particular taste to the consumer, this will contribute to increasing the functional value of the product. Examples of such information about origin, which indicate a high functional value, are the denominations Swiss chocolate and chocolate (creams) from Brussels.

### *Social value*

Products have a social value when a product relates to a group to which one wishes to belong. For example, if a particular origin is known to consumers as having an expensive and high quality product, this can also increase the social value of such a product from the perspective of consumers. The product described can signal that a person who purchases this has a high income at his or her disposal and is member of the class of better earners. Moreover, purchasing a domestic product can also express the fact that one feels closely attached to one's region and that one wishes to belong to the group of patriots.

### *Conditional value*

In specific consumption situations, perceived functional and social value vary. In a situation in which the consumer, for example, wishes to purchase a gift, it is conceivable that he selects high quality Lübeck marzipan whereas, for his own consumption, he purchases a much cheaper marzipan from another manufacturer or marzipan not provided with details of origin.

### *Emotional value*

The ability of a product to generate emotions can produce an emotional value for the consumer. Bavarian beer is perceived by many consumers to be a traditional Bavarian product. Many associate it with the Bavarian beer culture and the boisterous atmosphere of the October Beer Festival. On purchasing (and enjoying) a product that bears information about the origin being Bavaria, these associations are reactivated and generate positive emotions in the consumer.

In agreement with this, OBERMILLER AND SPANGENBERG (1989) expected that the direct influence of attitudes which a consumer has with regard to a region relate, to a large extent, to

affective emotions which the consumer has in relation to the region and which circumvent pure inferential, cognitive advertising.

### *Epistemic value*

Depending on the desire of consumers for stimulation and change, and the ability of products to evoke novelty and curiosity, these can give the consumer an epistemic value. For example unknown food specialities from other countries (e.g. China, Latin America) can create more diversification in the common diet plan.

Insert here figure 2

The results of a German-wide survey about regional food specialities (PROFETA ET AL., 2007) show that the attribute origin provides the consumer with all the described values.<sup>5</sup> In a factor analysis the three factors “*Quality*”, “*Tradition and Authenticity*” and “*Variety Seeking*” were extracted. The first one “*Quality*” can be assigned to the functional value. The second one “*Tradition and Authenticity*” can be equated with the social and the emotional value whereas the factor “*Variety Seeking*” is equal to the epistemic value. ITTERSUM (2003), who carried out a Lisrel-analysis, comes to the result that “*consumers’ intention to purchase regional products is influenced by more than just the perceived quality of the regional product.*” [...]. Therefore he stated, that “*The name of the regional product is perceived as providing social value.*” According to the emotional value he concluded that “[...], *even if the regional product is not produced in the region to which the name of the product refers, the emotions elicited by the regional name still influence consumers’ intention to purchase that product.*” In his study ITTERSUM (2003) developed as well hypotheses about the epistemic value of a regional product but the results do not allow firm conclusions. This may be due to the fact that he only analyzed products from the region where the respondents live. The above mentioned German study incorporated specialities from abroad as well. For these, in accordance to the results of this study, it can be expected that these have a much higher epistemic value than (known) regional products.

Origin consequently acts, as is illustrated in the above figure 2, not only on the functional value of a product, but also includes other values, as have been defined by SHETH ET AL.

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<sup>5</sup> The conditional value is not discussed because it is only an intermediating value that refers to the impact of situations on choice decision.

(1991). The extent to which information about origin influences these values is for the most part dependent upon the attitudes, which include a number of the previously mentioned high-level abstractions or means, respectively and the sociodemography of the consumers. Later, these and other factors will be considered in more detail. In contrast to figure 1, in figure 2 perceived quality is classified as an element of functional values.

In addition to individual-specific variables, there are, however, also a range of product-group-specific parameters which exercise an effect on the significance of information about origin. These are not incorporated in the model of ITTERSUM (2001). As an example of this the deliberations of SATTLER (1991) are cited which posed the hypothesis that, in the presence of strong brands within a product group, information about origin loses importance.

Prior the importance of product-group-specific variables is discussed the impact of the country image takes centre stage. This short consideration is necessary because country image individual-specific and product-group-specific variables interact with each other as will be shown in the sections four and five.

### **3. Country Image**

In an empirical study, ITTERSUM (2001) investigated the image which specific regions have in relation to the products beer and potatoes. By using a factor-analytical analysis of suitable battery items, he identified, in addition to the human and nature dimension, an additional dimension – climate. The three dimensions forming the product-specific regional image had in turn an effect on the perception of the value of a product. In this survey the functional values quality and health value and the dimension exclusivity, which can be assigned, in the categories drawn up by SHETH ET AL. (1991), social or emotional value were positively influenced by the product-specific regional image.

The use of product-specific regional attitudes, in order to draw conclusions about product attributes, in contrast to general images of countries, can provide an explanation for the only incompletely understood results of CO research up until now (NAGASHIMA, 1970; NAGASHIMA, 1977; WALL ET. AL., 1991). The studies which, up until the beginning of the 1990s, analyzed the importance of the image of a site of origin in the valuation process had problems in explaining the product-specific effect. The reason for this was, above all, that these studies measured the general image of a country or a region. Although the general image of a country or a region can serve as an “*underlying causal driver*” in the perception of a country or re-

gion as the producer of a product (JOHANSSON ET AL., 1994: 159), its predictive value in relation to the characteristics of products of a specific product group is, in general, not very high.

ITTERSUM (2001) correspondingly drew the following conclusion: *“The expertise needed for making a product is product-specific regional characteristic. It would be more relevant to measure the product-specific image of a place, which are the beliefs consumers have with respect to the suitability of place for the product of a specific product”*.

Insert here figure 3

In figure 3 the terms product-specific country image and general country image are embedded in the previous framework. The extrinsic product characteristic origin activates in the consumer the already existing image of a country (see arrow 1). The activated image of a country, in turn, is drawn upon in evaluating the perceived value of a product. This can take place indirectly (see arrow 2), as well as also directly (see arrow 3).<sup>6</sup> It is therefore conceivable that the regional-specific speciality Greek cheese feta has a very high perceived quality (positive CO effect) for a German consumer, because of the very positive image of the country Greece stored in his or her mind. This positive country image for example can rely on a high perceived product competence of Greece and thus on a very good product specific country image.

In contrast, it is possible that the perceived value of Greek feta is judged to be worse by these consumers who are for example very patriotically (see arrows 4 and 5 for the influence of individual-specific variables on the interaction between the image of a country and the “perceived value”). If such a consumer wishes to take into consideration support for the local economy when purchasing a product, then Greece as origin can have a negative effect on CO. Whether the consumer finally purchases the product, in this case, therefore depends on

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<sup>6</sup> A number of researchers have argued that the effect of the country of origin on the judgement of quality of a product can be explained by the halo and the summary effect (ERICKSON ET AL., 1984; JOHANSSON, 1989; JOHANSSON ET AL., 1985; SHIMP ET AL., 1993). According to HAN (1989) it is implicit in the halo concept that the origin effect influences notions of product characteristics which, in turn, influences the evaluation of product quality. The effect of origin is therefore indirect in nature. The second effect referred to already, the so-called summary effect, states that the image of a country is based on experience with products from that particular country and the correspondingly perceived characteristics of the products manufactured in that country. In contrast to the indirect effect, with the summary effect, origin directly influences the assessment of product quality in the following manner. From experience gained<sup>6</sup> with the product from this country, a notion is developed about the product characteristics.

whether the effect of the information about origin, with both effects subsumed, is overall still positive or not.

At this point, the double CO effect of a typical regional speciality such as, for example, feta (which does not come from the same region as the consumer) will be discussed briefly once more. In many studies differentiation of the CO effect was not implemented. Moreover, in most cases only those regional products were investigated that carried just simple information about origin. The products analyzed had no special or above-average quality, due to an existing close relationship with a production or processing site. In this case, a CO effect, with a corresponding patriotic attitude on the part of the consumer often heavily rely on the fact that the consumer lives in the region or in the country in which the product is manufactured (see arrow 5 for the effect of individual-specific variables on the interaction between product characteristics and the “perceived value”). As the traditional, typical regional speciality which comes from another country cannot satisfy patriotic attitudes (“*higher-level abstraction*”), this has to convince by means of a positive product-specific regional or country image. Only then can it have a positive CO effect for this.

In the case of the study of ITTERSUM (2001) it can be stated that he took regional specialities in consideration. Nevertheless, he did this only for the area where the product is produced. But as the next section shows, the buyers of specialities from the own region are not the buyers of specialities from abroad, both groups have different attitudes and motives. This result will be taken in account by the now developed extended theoretical framework.

#### **4. Impact of individual-specific variables**

In a series of CO studies, in addition to the pure determination of the effect of origin, the influence of sociodemographic characteristics on paying attention to information about geographical indication was analysed. As already mentioned, with typical regional specialities, there are great differences in the purchasing motivation of consumers who live within or outside the region of production. These groups differ as will be shown in this section in their sociodemography and psychological characteristics. Therefore, it is sensible to regard the impact of these variables in the context of consumer studies that not only covers the region of production but also spots from outside. Taking this allegation in account in the following, the influence of sociodemography and psychological variables will be considered and discussed.

A significant effect of the age of consumers on the importance of regional origin, in this case, regional origin means that the product comes from the close vicinity of an individual, has been demonstrated. Groups of older persons have a higher preference for regional origin than younger individuals (DORNOFF ET AL., 1974; HAN 1988; SCHOOLER, 1971; SCHOOLER AND SUNOO, 1969; WALL AND HESLOP, 1986). Nevertheless, it has to be asserted that influence of age on purchasing foreign products differs for specific products and countries (Bannister and Saunders, 1978; Johansson et al., 1985).

In relation to the influence of the level of education the following was found: the higher the level of education, the more positive foreign products were valued and the less important was regional origin (ANDERSON AND CUNNINGHAM, 1972; DORNOFF ET AL., 1974; SCHOOLER, 1971; WALL AND HESLOP, 1986). BALLING (2000) also investigated the effect of the origin Bavaria on the choice decision concerning food products and came to the conclusion that people with A levels and university education paid less attention to the own region of origin Bavaria.

For the typical Bavarian speciality beer, it was shown in a Discrete-Choice experiment carried out throughout Germany that, in Northern Germany, a higher level of education is accompanied by a higher degree of choice probability of the typical Bavarian beer brand "LÖWENBRÄU" (PROFETA, 2006: 188). It is to mention that conditional logit models as used in the above study allow combining attitudes with behavioural data in estimation. Therefore these both types of data can be linked and deep insight in the consumer decision process can be gained.

In agreement with the findings of PROFETA (2006), in a survey carried out by CMA AND ZMP (2003), it was established that consumers with a higher income more frequently visit restaurants that offer foreign specialities. A cluster analysis, using the data set from the study referred to, identified a consumer segment that preferred in particular specialities from other regions compared to local ones. This cluster was characterised by the fact that the level of education and the level of disposable income was above that of the other three established clusters. It was possible to show that the difference with reference to this characteristic in a comparison of the groups is significant by using the Duncan test (PROFETA ET AL. 2007).

Concerning the effect of income again WALL AND HESLOP (1986), WALL ET AL. (1991) and BESCH AND PRACHHART (1988) were able to show a significant positive correlation between income and a positive attitude with regard to foreign products. That is high income resulted in

greater consideration of products manufactured outside the region and to a low valuation of those produced regionally.

In anticipation of the following psychological results, at this point, a hypothesis of BALLING (2004: 71) is recounted, that assumes interdependence between sociodemo- and psychological characteristics. He explains the influence of age by referring to the fact that, in the case of younger individuals, the identification with one's own region is possibly not yet so marked. These individuals are more open and rather more cosmopolitan oriented. The relationship and binding to one's own region is (still) not so close. In his opinion, it should be noted, however, that from a particular age on, attention to regional origin declines.

Based on the concept of ethnocentrism, SHIMP AND SHARMA (1987: 280) introduced the concept of consumer ethnocentrism. This is defined as "*the beliefs held by consumers about the appropriateness of purchasing products originating in a foreign country*". Consumer ethnocentrism focuses the effect of ethnocentric feelings on the purchasing decision of the consumer. Consumers who display a marked sense of consumer ethnocentrism tend to preferentially purchase local products compared to consumers with a low sense of consumer ethnocentrism (ITTERSUM, 2001; SHARMA ET AL., 1995; SHIMP AND SHARMA, 1987). Therefore, they purchase the local product not because of conviction that it has a higher quality (BALLING, 2000: 33), but because of its origin, which satisfies their ethnocentric feelings (emotional and social value) and this produces an added value to this regional product.

### *Product familiarity*

In addition to the psycho- and sociodemographic variables referred to already, the individual-specific variable "familiarity with the product" also influences the significance of information about origin for the purchasing decision. The term product familiarity is typically defined as the "*number of product-related experiences that have been accumulated by the consumer*" (ALBA AND HUTCHINSON, 1987: 411).

SCHWEIGER (1995) considers the influence which the image of the country of origin of the product has on the consumer to be stronger the lower the state of knowledge about the product or the brand in question is (WIRTHGEN ET AL., 1999). This result, however, contradicts the findings of HEIMBACH ET AL. (1989), who found that consumers pay greater attention to CO as soon as they become particularly familiar with the products or product groups (JOHANNSON ET AL., 1985; JOHANNSON AND NEBENZAHL, 1986). THIEDIG (2004: 55) tried to



reconcile the disparate results by drawing on the study of von HAN (1989). He assumed that, with existing familiarity of the consumer with the product, information about origin would have a direct influence on product valuation while, in the case of unfamiliarity with the product, the origin influenced the perception of attributes and consequently had an indirect effect on product valuation. Here, however, only the mode of action of information about origin was described. No word of explanation was given why, in different product groups, familiarity sometimes had a positive and sometimes a negative effect on paying attention to origin. A solution to this puzzle can be provided by considering product- group-specific variables.

### **5. Influence of Product-Group-Specific Variables on the Importance of Origin Labelling in the Decision-Making Process**

OBERMILLER AND SPANGENBERG (1989: 455) named four factors that influence the importance of information about origin in making a selection decision. These are the product categories heterogeneity, country brand heterogeneity, the clarity of the CO label and the availability of other information.

#### *Product category and country brand heterogeneity*

Product category heterogeneity indicates how great the variation of the products (brands) within a product category is in relation to the most important characteristics relevant to a purchase. In this context, it should be noted that the consideration is not limited to a single country, but extends across countries. An example, at this point in the discussion, is provided by the world-wide production of feta cheese. In numerous countries of the world, there are many producers who manufacture feta cheese in very different qualities. For example, in Germany, in most cases, the raw material used is cow's milk instead of goat's milk. Because of this fact, it can be said that there is large product category heterogeneity in the area of worldwide feta cheese production.

In contrast to product category heterogeneity, country brand heterogeneity relates to the degree of variation in the characteristics of the different products (brands) of a product category within a country which are most important for a purchase. If we delimit the above-mentioned example to Greece, then it can be shown that there are qualitative differences in the end-product feta as well, but that these are not as great as in a comparison extending across countries. As the name feta has been recorded as a protected origin designation within the EU, the

consumer can assume, almost always with a high degree of certainty, that Greek feta will always have a good quality.

*Clarity regarding the CO label*

According to OBERMILLER AND SPANGENBERG (1989: 445) a certain country brand homogeneity, which exists e.g. for Greek feta cheese, is important for the perception of origin, as the consumer can only fall back on origin as an indicator of the value of a product when the variation between the brands of a product group of a country is low.

If there is high country brand heterogeneity, the information content of the CO label is reduced, as it loses clarity. According to BRUNER ET AL. (1956: 11), individuals use that information about an object, for allocation to a category, which can be most quickly identified. A loss of clarity of the CO label, as a result of a theoretically high heterogeneity of country brands for Greek feta cheese, would result in a situation in which the origin would no longer serve as a quick identification symbol for the quality of a product and therefore other, simpler to interpret information would be used.

Complimentary to the assumptions of OBERMILLER AND SPANGENBERG (1989: 445), the supposition can be made that, with higher product homogeneity (for example, only small differences in quality between the world-wide producers of Feta), the origin of the product will only be attributed little importance. In contrast, a greater influence of geographical information can be expected when, at the same time, there is greater homogeneity in country brands (e.g. relative homogeneous and high quality Greek feta cheese). In this situation, it can be assumed that the CO label has a high degree of clarity. But, this is only the case when there is also a certain familiarity with the product on the part of consumers, as will be considered in the following.

*Product familiarity in the context of product category and country brand heterogeneity*

If one consumer has no or only little product experience then she or he has no or only little knowledge about the parameters product category heterogeneity and country brand heterogeneity. Consequently, it can be assumed that these do not come under consideration in the process of product valuation.

In this context, information about origin with, at the same time, a positive general image of a country existing in the mind of one consumer will bring about a positive influence on the purchase decision (please refer to the section on country image). This fact is independent of whether there is a high degree of homogeneity in country brands or not.

The problem of CO research up until now is that familiarity of consumers with a product has not been analysed in context with product heterogeneity and country brand heterogeneity. This shortcoming can partly explain the divergent results obtained in relation to the influence of familiarity with a product (HEIMBACH ET AL., 1989: 460).

The following example can be used to elaborate this statement. As has been mentioned already, with greater familiarity with a product, there should also be greater country brand homogeneity, in order that information about origin represents a clear symbol. If, in one country, there is a high measure of market heterogeneity, then a positive evaluation of a label referring to this country of origin can only be expected from consumers with little or no familiarity with the product and under the simultaneous assumption that these consumers have a positive general image of this country. On the other hand, those consumers who are familiar with the product would, because of the lack of clarity of the information about origin, not call upon this in the process of making a purchasing decision.

#### *The availability of additional information*

In addition to product category heterogeneity and country brand heterogeneity, the importance of information about origin also depends on the availability of additional information. The consumer will only fall back on information about origin when there is no better indicator of the value of the product (OBERMILLER AND SPANGENBERG, 1989: 445). If additional, extrinsic characteristics, such as brands, quality labels or intrinsic key characteristics are available, these will be taken into account, if they are better suited for determining the perceived value of the product (Wheatley et al., 1981). In conformity with this, KÜHN (1993: 120) and BALLING (1995: 83; 1994) established that, in a reverse conclusion, CO effects appear, in particular, when specific market and price information is rare.

The availability of additional information can partly be viewed as a product-group-specific factor. Accordingly, in the area of food, there are product categories with few or no well-known brands (e.g. the product category meat products) while, on the other hand, product

groups exist (e.g. the product category beer or soft drinks) which are dominated by strong brands, which can be drawn upon in evaluation of the product.

Figure 4 summarizes the information described in this and the preceding section and portrays this in the context of the mode of action of CO shown before. As can be appreciated from this depiction, familiarity with a product determines whether the consumer falls back on a general or product-specific country image (see arrow 1). In addition, product familiarity determines whether the consumer has knowledge about product category heterogeneity and country brand heterogeneity (see arrow 2). These two parameters influence the clarity of the CO label (see arrow 3a and 3b) which, in turn, taking into account other information (see arrow 4), influences the effect of the country image on the perception of other product characteristics (see arrow 5) and perceived product quality or perceived value, respectively (see arrow 6). In addition, the purchase of a product contributes to an increase in product familiarity (see arrow 7). Taking up the results regarding psychographic characteristics, at this point it should be mentioned that sociodemographic variables, such as age and level of education, can have an influence on the attitudes of the consumer (e.g. consumer ethnocentrism) (see arrow 8).

#### *Interaction between CO-labels and brands*

It is conceivable that, with a very well-known brand, the importance of additional information about origin is less than when this information is given in combination with a somewhat less well-known brand. SATTLER (1991: 211) who, like ETTENSON ET AL. (1984), also carried out a conjoint analysis, was able to take this information about origin and brand interaction into account, in the context of this methodology, with the aid of a so-called interaction design. Another approach is that of discrete choice analysis, which underlies the conditional Logit model. Using this methodology in the context of a survey across Germany, PROFETA (2006) investigated the interactions between brands and information about geographical origin for the product category beer. He showed that unknown brands benefit more from CO-labelling than strong brands. This conforms to the results of SCHAEFER (1995: 68). Furthermore, the study reveals that even a strong brand can benefit from protected geographical indications (PGIs) at places where it is a weak one. In Northern Germany, which is outside the typical distribution area the brand “LÖWENBRÄU” can be considered as weak brand and thus benefits from CO-labelling while no effect can be shown in the South, where it can be

considered as strong brand. Thus, inside its own home region there is no need to use PGIs for this brand, while outside such a CO-labelling increases selection probability.

A difficult consideration is that of the interaction between brand and information about origin when the brand already also activates a country image in consumers (see arrow 9 in figure 4). For example the beer brand “LÖWENBRÄU” indicates for some consumer the origin Bavaria. Thus, there is a mingling of the brand and origin effect, so that it is also difficult to determine for oneself the relative importance of these two extrinsic characteristic individually (JAFTE AND NEBENZAHL, 2001: 61). Up until now, there has been a complete lack of studies or theories regarding the brand-related origin effect. In future studies brand knowledge on the one hand and the knowledge of the consumer about the place of production of brand has to be taken in account. On the basis of segmentation analysis between persons who know the place of production of a brand and the persons who don't know the product origin the brand-related CO-effect can be covered. Another alternative is the application of mixed-logit-models (FRODE, 2001). Because of the cancellation of the IIA-assumption it is possible to calculate cannibalism effects between alternatives (e.g. brands, origins or combinations of both) in a market simulation. If a well-known, strong brand is excluded from a market simulation and a certain origin-labelled alternative that is combined with an unknown, weak or fantasy brand benefits more from this exclusion than others alternatives according to the simulated market shares then a brand-related CO effect of the strong brand can be concluded.

Insert here figure 4

## 7. Summary and Conclusions for Future Research

The main advancement of the described new theoretical framework for CO-research is the holistic consideration that is missing in older works who describes a lot of aspects of the CO effect separately and independent from each other without paying a lot attention to the interdependencies. Furthermore the offered framework integrates new but important impact factors on the CO effect and describes the interdependencies between them.

The created new extended model is able to describe the double CO-effect that emerges in the case of specialities (e.g. Parma ham or Feta cheese) that are steaming from outside the region where a consumer is living. As argued for such products may exist in dependence of individual-specific variables (e.g. high-level of ethnocentrism) a positive evaluation of the functional value and a negative evaluation of the social value.

Another advancement is the conjunction of the proposed models of JAFFE AND NEBENZAHL (2001), ITTERSUM (2003) with the ideas of OBERMILLER AND SPANGENBERG (1989). The problem of CO research up until now is that familiarity of consumers with a product has not been analyzed in context with product heterogeneity and country brand heterogeneity. This shortcoming can partly explain the divergent results obtained in relation to the influence of familiarity with a product. For this reason for future studies scales must be developed with which country brand heterogeneity, as well as product category heterogeneity, can be measured efficiently.

New studies reveal that there are significant interactions between brand and origin. In the product category beer weak brands profit more from a labelling with the origin Bavaria than strong brands. Therefore analyses have to be carried out including the measure brand strength and brand knowledge as parameters. As mentioned in the previous section there has been a complete lack of studies or theories regarding the brand-related origin effect. In future studies consumer's knowledge about the place of production of a brand has to be taken in account. On the basis of segmentation analysis between persons who know the place of production of a brand and the persons who don't know the product origin the brand-related CO-effect can be covered.

The new extended theoretical framework has to be tested empirical and therefore call for future CO research in the food sector. At this it is recommended to analyze not only parts of the models but rather to test the model as far as possible including the impact factors and interdependencies as discussed in this paper. Without adequate consideration of intermediating vari-

ables CO studies can generate artificial results which can not be used for management recommendations because of lack of market realism. New developments in the area of market research methods like mixed logit and data merging allow combining consumer's attitudes, brand knowledge etc. with behavioural data and to take brand-related CO effects into account. Therefore in future it should be possible to test the developed framework as a whole.

Against the background of the improvement of statistical methods WEDEL ET AL. (2000: 207) advocate to develop holistic models which allow deeper insights in consumers' decision making process as emanates from the following citation from the article about the future of marketing modelling.

*“One of the great challenges for marketing model building in the next one or two decades is the integration of models that have until now been applied disjointedly into broad modeling frameworks. Since Marketing Science sets out to understand and predict the behavior of customers in response to marketing stimuli from multiple competing firms, it does not benefit from the reduction of those substantive problems to forms that are convenient from a mere mathematical or statistical perspective. Therefore, there is a growing need for models that deal with all potentially relevant aspects of consumer behavior within integrated frameworks”.*

We agree with this approach and empirical studies are planned to test the developed model.

At the end it should be mentioned that a great deal of the introduced model can be used to describe and analyze the mode of action of brands as well. Similar to geographical indications well-known brands possess images. As these images have to be built up through advertising and promotion it is necessary to integrate further marketing variables into the model.

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Figure 1: Correlation between Perceived Quality and Perceived Value

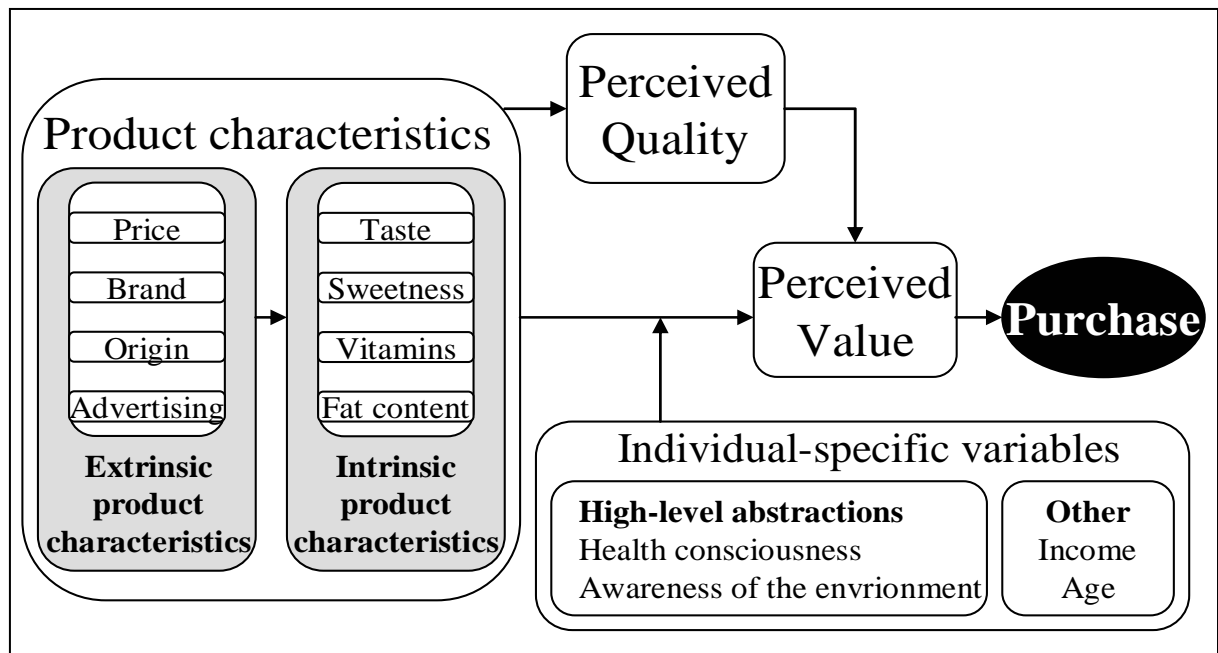


Figure 2: Perceived Value as an Indicator for the Purchase Decision

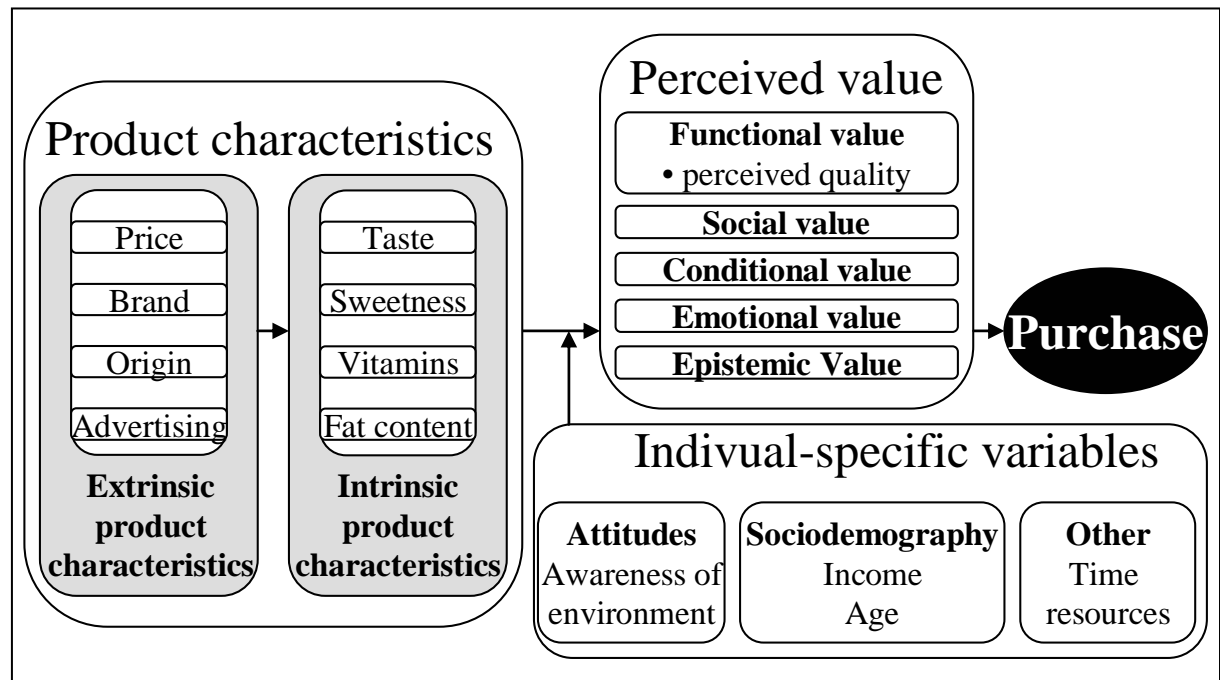


Figure 3: Influence of the Country Image on Product Valuation

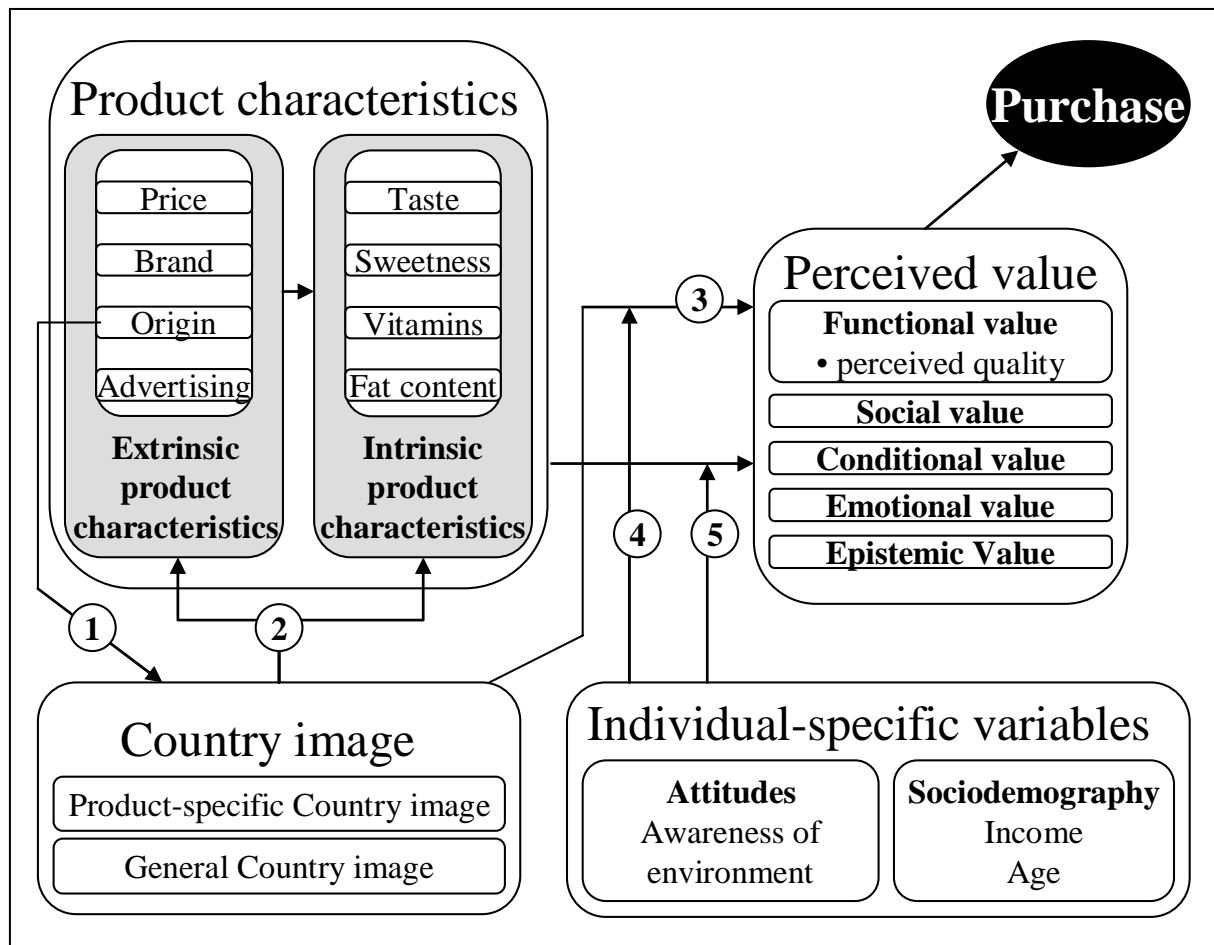


Figure 4: Mode of Action of Information of Origin in the Process of Decision-Making

