

## **The Value of Region of Origin, Producer and Protected Designation of Origin Label for Visitors and Locals: The Case of Fontina Cheese in Italy**

### **The case of Fontina cheese in Italy**

**Elena Maria Marcoz** (corresponding author)

Catholic University of Sacred Heart of Milan, Largo Fra Agostino Gemelli 1, 20123 Milano (ITALY), [marcoz.elena@gmail.com](mailto:marcoz.elena@gmail.com).

**T.C. Melewar**, Middlesex University, London, UK, [T.C.Melewar@mdx.ac.uk](mailto:T.C.Melewar@mdx.ac.uk)

**Charles Dennis**, Middlesex University, London, UK, [c.dennis@mdx.ac.uk](mailto:c.dennis@mdx.ac.uk)

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#### **Abstract**

This research reports an empirical survey of tourists' and residents' on the case of Fontina, a typical Italian cheese, considering the value that can be generated by linking a food product to the region of origin, producer and Protected Designation of Origin (PDO) certification. The paper segments typical consumers, exploring what images different consumers associate with these elements. Findings indicate that the perceived value of these attributes varies according to the distance between the region of origin of the product and consumers' residences. The findings should help tourism operators to better target marketing communications to the consumer segments.

#### **Introduction**

The European Union (EU) strongly supports the differentiation of typical food products on a regional basis. The importance of protecting this quality differentiation was officially recognized in 1992, when two regulations were adopted: Regulation (EEC) No 2081/92, on the protection of geographical indications and designations of origin for agricultural products and foodstuffs; and Regulation (EEC) No 2082/92 on certificates of specific character for agricultural products and foodstuffs. The Commission (DG AGRI) created different kinds of certification label that can only be used to describe authentic product corresponding to the specification laid down. The most used is PDO (Protected Designation of Origin) certification, which identifies products with a strong link to the defined geographical area where they are produced. Since 1992, the EU has strengthened its support for the development and protection of local products; in particular, on December 2010, the Commission adopted the Quality Package. This comprised a series of measures designed to consolidate schemes, labelling terms, and initiatives to help producers in communicating the qualities of product to consumers and to improve consumer information about the input to products.

The increased importance of EU certification labels is reflected by the growth of the number of certified products; in 2011, the 1000<sup>th</sup> quality food name was registered. This growth is explained by the fact that consumers are searching for higher and higher quality standards. They now require not only much higher dietary, hygiene and health standards in food products, but also look for reliable certifications and reassurance of products' origins and production methods (Kovács and Zsarnóczy, 2007). Certifications assure quality standards (Dimara and Skuras, 2005) since to get the certification label producers have to pass through an official quality control process that guarantees the effective implementation of required production conditions.

Despite plentiful research concerning consumer preferences for food, food buying decisions, and consumer perceptions towards food quality attributes, there is little work focused on consumers' attitudes towards food quality indicators and key information such as certification labels and region of origin. Moreover there is very little work attempting to study the differences in the perception of such quality indicators by consumers living nearby and far away from the region of origin of typical food products. Within this context, the aim of this paper is to understand which kind of value can be generated by linking a typical food product to the region/ producer/ certification from the consumer's perspective and as a consequence where and which kind of value should be generated by the producers. We also aim to investigate whether these elements (region of origin, producer and certification) have a different weight for consumers living in different places. This could be useful to support exporting decisions, since the market for food products typical of a region is growing, reaching consumers all over the world. Moreover this paper also aims to segment typical food product consumers and understand what images different consumers associate with these three elements. Addressing these aims may enable producers and tourism operators to achieve communication goals effectively.

The paper is structured as follows. First a literature review is presented, to define the framework which is the starting point of the present research, and from this review three hypotheses are generated. Second the research method is described and the techniques used are presented. Finally the findings are reported and the results are discussed.

### **Literature review and research hypotheses**

Value assumes different significance for different targets and consumers (Fiocca, 1993), value is a complicated concept that assumes different meanings when applied to different contexts. At a basic level, value for the customer is defined as the relationship: benefits *versus* perceived sacrifices (Zeithaml, 1988; Duman and Mattila, 2005) and the value of a brand is equivalent to the concept of brand-equity (Aaker, 1991; Keller, 2003).

A brand's main purpose is differentiation (Wood, 2000). Certification labels can be considered as brands: they can be recognized through a logo; they offer protection to products and provide customers with quality assurance (Regulation (EEC) No 2081/92). The region of origin and the producer are not necessarily real brands, yet often play the same role and pursue the same goal (Pappu et al, 2005; Teuber, 2011).

Nowadays consumers tend to be careful and involved when searching for certified quality, particularly when dealing with food. Cullen (1994) underlines how the concept of food has changed and how eating is no longer exclusively and primarily aimed at satisfying a physical need. Consumers want production to follow processes and norms that can reassure them about food safety. They expect raw materials to come from certain regions and different targets assign different values to each element. Drichoutis, Lazaridis and Nayga (2007) investigate this phenomena focusing on the factors affecting product class involvement for food. Results reveal a number of factors that affect overall involvement with food and specific aspects of involvement (i.e. taste, nutrition, origin, ease of preparation and brand name, importance of price).

It's well known that consumers are guided and influenced by a variety of psychological, emotional, economic and social factors and that buying behaviour and process have acquired a semiotic and cultural dimension (Fabris, 2008). This caused an important shift in the priority allocated to different types of goods, which acquire very wide functions. Food, for example, is not only eaten to obtain the daily amount of calories required by our body, but has many other meanings. An expensive and exclusive food represents social status, healthy food stands for a healthy lifestyle, food frequently represents the country in which it is produced, and so on. Nowadays primary needs have been saturated and can therefore no longer be considered to be the main driving force of consumers' choices (Fabris, 2008). Different consumers are characterised by different needs and desires and perceive the value of the same product in a different way. Value is thus a relative perception that can change in response to context.

The relationship between producers and consumers is characterised by an information mismatch that can cause difficulties to consumers who presumably want to understand the real value of a product. Sogn-Grundvag and Østli (2009) study how consumers evaluate unbranded and unlabelled food products and explore their ability to select the products with the highest potential to meet their expectations regarding eating quality. Results indicate that Portuguese consumers, in spite of substantial experience in buying, preparing and consuming *bacalhau*, are uncertain in their in-store quality assessment and often use rather curious quality criteria: touching the dried and salted cod trying to “feel” the quality was common, some even broke the fish tail to assess the dryness. In order to avoid such confusion, producers often use different kinds of labels, like certifications or brands of origin, which become indicators of information and quality.

It is crucial to take into consideration the analysis of the perception of quality by consumers and its influence on buying decisions (Grönroos, 2000; Busacca, 2004). Interesting models are developed by Von Avesleben (1989) who claims that the consumer can deduce the intrinsic qualities of a product starting from its total quality using information on two or more of its properties (this is the so-called “key information” that allows consumers to save energy and avoid further research; price and brand are the most commonly used indicators) and by Grunert *et al.* (1996) who developed the model of total quality, considering product characteristics in three categories: search, experience and credence attributes. Consumers’ preferences are significantly influenced by the information set available, especially for products which have characteristics typical of credence attributes (Grunert, 2005), i.e. characteristics that a consumer may not be able to know even after the purchase and consumption. Only few consumers possess the skills to understand whether the correct procedures for preparation of food have been followed or to judge food authenticity. This suggests that foods can be characterized as credence goods (Rangnekar, 2004). This inability to make a proper assessment of features that are increasingly assigned importance leads consumers to seek external guarantees and assurances that help them in buying decisions. The origin of food, the producer’s reputation and territorial certifications may be good examples of effective guarantees.

### ***Region of origin***

Several authors have studied the so called *made in* effect, which is of interest in the study of certifications of origin. The *made in* effect was analysed by, among others, Han (1989), Roth and Romeo (1992), Chryssochoidis *et al.* (2007), Bloemer, Brijs, Kasper (2009). Pappu, Quester and Cooksey (2006) examine the impact of the country of origin of a brand on its consumer-based equity. They reported that consumer-based brand equity varied according to the country of origin of the brand and product category. This impact of country of origin on brand equity occurred where consumers perceived substantial differences between the countries in terms of their product category-country associations.

Numerous authors (Bruwer and Johnson, 2010; Veale and Quester, 2009) analyse the impact of the food product origin on consumers’ decisions. The indication of the origin increases perceived quality (Veale, 2008), since the origin has become an information substitute reassuring consumers about food safety, thus reducing risk perception in food consumption (Kim, 2008; Mørkbak *et al.*, 2010). These results have been confirmed in various studies of products, such as wine (Orth *et al.*, 2005), beer (Lentz *et al.*, 2006) and cheese (Bernabéu *et al.*, 2010).

From this, follows our first hypothesis:

**H1** For typical food products, the region of origin significantly impacts on value perception.

### ***Protected designation of origin (PDO)***

If the origin of products is relevant, the certifications of origin appear to be the most effective way to communicate this information. The Fotopoulos and Krystallis (2003) study can be considered as a fundamental point of reference with which to analyse the impact of certification labels on consumers’ decisions. The authors use conjoint analysis to explore Greek consumers’

willingness to pay for PDO apples from the area of Zagora, Central Greece. They find that many consumers view PDO labels positively and are willing to pay a premium price for them. However the PDO label is of minor importance for more than a third of the buyers. Menapace *et al.* (2010) compared the simple indication of origin and official certifications of origin for olive oil. They reported that official certifications (in particular PDO) are considered by consumers to be reliable indicators of product quality. Fait (2010) leads an interesting investigation into the wine industry. The study found that the average consumer has a good perception of the relationship between wine and territory (region-brand awareness) and that this connection does not always occur through the single brand but more often by means of the designations of origin. Dimara and Skuras (2005) confirm that information linking place and product is among the top of the list of information that wine consumers look for on wine labels. Linking products to place through the specification of either ancient traditional methods of production or local raw materials and producing regionally denominated products, with certifications such as PDO, is a strategy to differentiate products that enables producers to target a market niche for quality products, serving a wide range of consumer needs.

Several other authors studied certifications of origin as drivers of purchase decisions (Krystallis and Fotopoulos, 2003; Carpenter, 2004). In particular, Monjardin de Souza Monteiro and Ventura Lucas (2001) point out the certifications' effectiveness in reporting quality. Tendero and Bernabéu (2005), studying the Spanish market for cheese, report that the appellations of origin reassure consumers about the place of production and thus serve the purpose of food safety guarantees. This prior research leads the following hypothesis:

**H2** For typical food products, PDO certification is an element that significantly impacts on value perception

### ***Consumers' perceptions according to their distance from the region of origin***

Little prior research has investigated regional differences in consumer preferences for certified food. In one study, Baker *et al.* (2004) investigated consumers' attitudes towards organic food, exploring why consumers behave differently in the UK and Germany despite both groups of consumers holding similar attitudes about organic foods. Van der Lans *et al.* (2001) reported on the preferences of Italian consumers for the characteristics of extra virgin olive oil. The authors highlight that the origin and PDO certification can have direct and indirect effects on consumers' choices. The indirect effect occurs when the origin and the certification are perceived as signals of quality and are appreciated as substitutes for other information. The direct effect occurs when these attributes are valued in their own right rather than only as mediators of other features. Both the origin and the certification indirectly play an important role in influencing consumer choices. As to the direct effect authors identified an interesting phenomenon. Segmenting the market, it emerged that consumers living in the region where the oil is produced are more sensitive to the origin of the product than consumers from other regions.

Downs and Stea (1973, p.317) highlighted the importance of distinguishing geographical distance, which is related to space distance, from cognitive distance, described as "distance estimates and beliefs made or held in the absence of the object and which relies upon memory, stored impressions, judgments and beliefs". Thus, knowledge and the assimilation of cultural values related to a place shorten the cognitive distance among the consumers and the place. We expect that people who live closer to or further from the region of origin perceive the value of typical food products as composed of different components, more or less important according to different factors. Our third hypothesis is intended to explore this aspect in more detail, providing a study of how Fontina cheese, the focus of the present analysis, and its characteristics are differently perceived and valued by consumers residing in the place of production (Valle d'Aosta) and elsewhere. This leads to the third hypothesis:

**H3** Consumers' perceptions of the region of origin, of the producer and of the certifications varies according to the distance of consumers' residences from the region of origin of the product, specifically:

- H3a Consumer behavior varies with cognitive and geographical distance from the region of origin;
- H3b The importance of PDO certification increases with increasing distance from the region of origin;
- H3c The importance of the region of origin decreases with increasing distance from the region of origin;
- H3d The importance of the producer decreases with increasing distance from the region of origin.

In sum, the existing literature has shown that origin and in particular certificates of origin play an important role in food buying decisions. By testing our first and second hypotheses (H1 and H2), we intend to measure the weight that these exert on consumer preferences for Fontina cheese. Further, we intend to elicit any regional differences in the manifestation of these phenomena (H3).

## **Research context and methodology**

### ***Context***

The hypotheses are operationalized by means of a case study of Fontina cheese, produced in Aosta Valley, in the northern part of Italy. Italy is the world leader for the number of certificated products, with 239 products in the EU register, of which there are 149 PDO (2012). Fontina cheese is produced from alpine pastures by dairies that are members of the Milk and Fontina Cooperative Producers (MFCP). The MFCP was founded in 1957 with the aim of collecting, maturing and marketing Aosta Valley's most important agricultural product, Fontina cheese.

From small beginnings, the producers now number 300. In 1958, during the first year of activity the number of cheeses delivered by the members were less than 40,000, while today the amount reaches 350,000 cheeses. The production is limited, thus the quantity available for export is also limited (10% of total production) but nonetheless this cheese is exported worldwide. The production cooperative is UNI EN ISO 9001:2000 certified and has a turnover of about €20,000,000 (data from Aosta Valley Department of Agricultural and Natural Resources, 2012).

Worldwide there are many certified locally produced foods that are often not widely known outside the region in which they are made. These products may be highly regarded and have high potential. In Italy, for example, there are 41 PDO certified cheeses (Council Regulation (EC) No 510/2006), some of which are very well known, such as Grana Padano and Parmigiano Reggiano, while others are less common, such as Fontina cheese. The case study aims to answer the research questions by investigating consumers' preferences for the purchase and consumption of Fontina cheese.

### ***Data collection***

To inform questionnaire design, literature was consulted (Lawlor and Delahunty, 2000, Harrington et al. 2010; Bermúdez-Aguirre and Barbosa-Cánovas Gustavo., 2011; Mathiou, 1974) to identify the most relevant attributes of cheese and especially of Fontina cheese. An initial pilot questionnaire was validated through a qualitative analysis, carried out through four in-depth interviews of approximately 30 minutes each. Two producers of Fontina cheese in Aosta Valley and two retailers in Aosta were interviewed to discuss the main characteristics of Fontina cheese and comment on the pilot questionnaire. They were asked if they judged the questionnaire comprehensive and suitable to investigate consumer preferences for the product Fontina cheese. In particular, they were asked to focus their attention on the attributes selected from the literature to define the profiles that would be used in a conjoint analysis (Table 1) and the attributes listed in Table 4, whose importance would then be rated by consumers. The results of these interviews informed the design of the final questionnaire (Lee et al, 2005; Cai, 2002).

The questionnaire comprised three sections. First, profiles of Fontina cheese products were evaluated; second, consumers were asked about their habits and preferences; and third demographic data were collected.

In the quantitative phase, more than two hundred consumers from Aosta, Milan, Switzerland and Greece were interviewed face to face with the objective of eliciting perceptions of value related to Fontina cheese (the product) and the extent to which its value might be generated by the region of origin (Aosta Valley), by the producer (cheese producer), or by the certification label (PDO).

This research used convenience sampling. In Aosta both residents and tourists were interviewed in supermarkets and in traditional specialist food shops. Greek consumers were interviewed in Aosta, too; they were part of a large group of tourists from Greece that spent few weeks in Aosta Valley in February 2011. In Milan and in Switzerland (Lugano) consumers were interviewed outside supermarkets and traditional specialized food shops. Milan is the provincial capital of Lombardy, the region where most Fontina cheese is consumed (38% of the Italian consumption); Switzerland is a region often compared to Aosta Valley, because of its similar landscapes and products; Greece is considered to represent an interesting focus in this research because, as well as Italy, it is well-known for its typical food products, among which there are many certified cheeses (20 cheeses PDO labeled in September 2012).

Thus, the sample included consumers with a spread of geographical distances and knowledge of Aosta Valley. We collected 220 responses, i.e. above the minimum (100-200) recommended by Quester and Smart (1998) to obtain reliable results from conjoint analysis.

### ***Data analysis***

Conjoint analysis was used to analyze the relative importance weights of three quality indicators: PDO certification, region of origin and producers of Fontina cheese. Conjoint analysis is widely used in marketing to evaluate consumer preferences (Hair *et al.*, 1998), particularly to examine preferences for food product attributes (Fotopoulos and Krystallis, 2003; Darby *et al.*, 2008). The necessary data for conjoint analysis consists of consumer evaluations of alternative product concepts, described as sets of attributes levels (Gil and Sanchez, 1997).

Murphy *et al.* (2000) point out that the conjoint attributes should include the ones that are most important for consumers and those that can be influenced or manipulated by the producers. Studying Fontina cheese the attributes considered are quality indicators that producers can underline to promote the product. The PDO certification, the region of origin and the name of the producer convey quality in different ways according to different targets.

Table 1 summarizes attributes and levels considered in the conjoint analysis study. Each attribute used two levels, except for price that uses three levels, this means 24 possible scenarios (2 x 2 x 2 x 3). Obviously it would be too tedious for consumers to evaluate all of these scenarios. The Orthoplan subroutine in SPSS was therefore used to produce an orthogonal main-effects design, which ensures the absence of multi-collinearity between attributes.

### **Table 1. Attributes and levels.**

Table 2 reports the eight combinations of attribute level that were used in the study. The respondents were asked to rate each of them on a scale from 1 (minimum) to 9 (maximum). The respondents were asked to rate (using a scale from 1 to 9) different importance values for attributes of Fontina cheese: produced in Aosta Valley; has PDO status; and is produced in alpine pastures (Table 4).

### **Table 2. Profiles.**

Cluster analysis (K-means) was then carried out from the results of conjoint analysis to identify consumer segments based on the preferences for the several Fontina cheese attributes (Green and Krieger, 1991; Krystallis and Fotopoulos, 2003; Veale 2009). The K-means clustering

algorithm resulted in a five-cluster solution. To validate the cluster solutions, univariate analysis of variance (ANOVA, Table 3) was conducted. After a careful examination of solutions involving any number of clusters between four and fourteen, it was determined that the five-cluster solution provided the most meaningful distribution of subjects (Orth et al, 2005). Moreover, owing to the relatively limited size of the sample, the solution of five clusters was considered as the most realistic, easily describable and suitable to our objectives.

Discriminant analysis was then carried out to model how the region of origin, PDO certification and the producers are perceived by consumers and what kind of value they represent.

**Table 3. ANOVA.**

**Table 4. Values.**

***Sample description***

Table 5 reports the composition of the sample. People of any age were invited to complete the questionnaire, since Fontina cheese has a wide target, and therefore the respondents span a spread of ages. Forty-three percent of the respondents are men and 58 percent are women. Milan and Aosta each represent 34 percent of the sample, Greek and Swiss people are each 16 percent.

**Table 5. Sample description.**

**Empirical results**

***Region of origin and protected designation of origin (PDO)***

Using the conjoint procedure, utility scores were calculated for each level of each attribute in the conjoint profile of Fontina cheese. The relative importance of each attribute was then calculated as the utility range (i.e., highest minus lowest utility) of the attribute divided by the sum of the utility ranges of all four attributes (Okechuku,1994), to indicate the relative importance of each attribute. The conjoint analysis results indicate that the region of origin is the attribute which plays the most important role in consumer likelihood to buy, closely followed by PDO certification. The relative importance of the former, is 42.7 percent, while the relative importance of the latter is 35 percent. The other attributes considered in the research are less important: the relative importance of price is 14.3 percent and the relative importance of the producer is 8 percent (Table 6).

**Table 6. Conjoint analysis results on the whole sample.**

Lowest price has a positive utility compared to highest prices. *Ceteris paribus*, consumers prefer the cheapest solutions.

***Consumers' perceptions according to their distance from the region of origin***

***Cognitive distance***

Investigating cognitive distance, we asked respondents how long they had been living in or coming to Aosta Valley, assuming that frequenting a place affects the assimilation of cultural values related to it. Figure 1 shows the pattern of importance across the segments on each of the four elements included in this research.

**Figure 1. Relative importance according to cognitive distance.**

The importance of PDO certification increases with increasing cognitive distance. PDO certification is relatively unimportant for people born in Aosta Valley (9%), while it is the attribute that impacts the most on the behavior of consumers who have been coming to Aosta Valley for less than five years (47%). The producer is very important for people who were born in Aosta Valley (22%) and also for those who live in Aosta Valley (6% and 12% respectively).

The region of origin has a relative importance of more than 50% for consumers who live in Aosta Valley.

#### *Geographical distance*

Other interesting results emerge if we consider the geographical distance between consumers and Aosta Valley (Figure 2).

#### **Figure 2. Relative importance according to geographical distance.**

The importance of PDO certification increases as the geographical distance from the region of origin increases. Consumers from Aosta Valley consider PDO certification as the least important element (11%). On the other hand, the importance of the producer decreases as we move further from the region of origin. The region of origin is one of the most important attributes in every case.

#### *Flexible segmentation through cluster analysis*

A K-means cluster analysis was carried out. The five resulting clusters have a significant and clear interpretation. Therefore they were used to represent five segments that differ from each other in their preferences in evaluating Fontina cheese (Table 7 and Table 8).

The pattern of importance across the segments on each of the four elements considered (PDO certification, region of origin, producer and price) is represented by Figure 3.

#### **Figure 3. Relative importance in each cluster.**

Table 3 showed that the clusters are meaningful and are significantly distinguished from each other on all four importance weights ( $p < .05$ ).

#### **Table 7. Means of importance by segments.**

#### **Table 8. Utilities by segments.**

#### **Figure 4. Utility in each cluster.**

Consumers in the first cluster ( $n=34$  customers, 15 percent of the total) are called Guarantee seeking because they look for any possible kind of quality guarantee and are very concerned with safety. They consider the region of origin the most important attribute, closely followed by PDO certification. They also consider the producer important and prefer Fontina cheese to be produced in dairies, since they have less trust in the production at the pastures (Figure 4 and Table 7). These consumers seldom go to Aosta Valley and many have only been there during childhood. They do not know either the producers or how they work, and consider cheese made in dairies safer, as it seems to be more controlled. They consider price to be important and prefer it to be high, i.e. price has a positive effect in perceived quality (Dodds, Monroe, Grewal, 1991). Being far from Aosta Valley, they need to be reassured about the quality of Fontina cheese through indicators they can easily read.

Cluster 2 ( $n=52$ , 24 percent) is labeled Region-oriented, since it includes consumers for whom the region of origin is by far the most important element. They are mainly from Aosta Valley and they claim they would never buy a Fontina cheese that was not from Aosta Valley. They also consider the producer to be important and prefer to buy Fontina made in pasture. PDO certification is not thought to be an efficient quality label.

Cluster 3 ( $n=40$ , 18 percent) includes the Demanding, consumers who want everything: quality and a low price. They are very concerned with the origin of Fontina cheese and with PDO certification. They want Fontina cheese to be produced in pastures and are sensitive to its price: they avoid high prices, but do not trust low prices. These consumers look for good value for money.

Cluster 4 is the largest (n=64, 29 percent) and includes customers whose main driver to buy Fontina cheese is PDO certification. We have labeled this segment “Official label confident” to signify that the only element they seem to be interested in is PDO certification. They mainly come to Aosta Valley for leisure, during holidays, they do not know the product very well and to be reassured about its quality by an official label.

Finally Cluster 5 is the smallest segment (n=30, 14 percent). It includes the Thrifty consumers who are mainly interested in low prices.

In sum, the five segments can be named: “guarantee seeking”, “region oriented”, “demanding”, “official label confident” and “thrifty”

### ***Profiling clusters***

In order to get further insights into the five segments of customers, a discriminant analysis was performed to profile the clusters by indicating how different quality indicators are perceived and which values consumers associate with them. Discriminant analysis can help to elicit what PDO certification, region of origin and producer mean to consumers (Carroll and Chang, 1970; Rencher, 2002).

Table 9 indicates that three variables (genuine, quality and ethics) are non-significant. The most significant variables are: safety, tradition, party, souvenir and industrial.

#### **Table 9. Test of equality of group means.**

Table 10 indicates the positions of the three significant attributes (region of origin, PDO certification and producer) in the bi-dimensional space representing consumers’ perception.

#### **Table 10. Functions at group centroids.**

Figure 5 represents consumers’ perceptions graphically. PDO certification is considered to be a strong guarantee of food safety that may have similarities to industrial production that consumers may perceive as safer, more hygienic and more controlled than craft production (Murdoch and Miele, 1999). Aosta Valley stands for memory and customs. It represents ancient tradition and helps consumers remember childhood, holidays and pleasant times spent in the mountains (Gilg and Battershill, 1998; Ilbery and Kneafsey, 1998). Pasture, finally, indicates a natural and very tasty cheese. Fontina cheese produced in pasture is perceived as natural, pure and high in fat, i.e. tasty.

#### **Figure 5. Discriminant analysis.**

Considering each cluster we report more detailed results below.

The “Guarantee seeking” cluster (Figure 6) does not associate Fontina made in pasture with food safety. In fact it is the only cluster that prefers Fontina cheese to be produced in dairies. PDO certification and Aosta Valley are the only attributes that this cluster uses.

#### **Figure 6. Guarantee seeking.**

Consumers in the “Region-oriented” cluster (Figure 7), mainly composed of customers from Aosta Valley, consider the region of origin as the most important guarantee. In their opinion, the region of origin represents the only important attribute when buying Fontina cheese. On the other hand, PDO certification is perceived to be distant from the values that Fontina cheese represents.

#### **Figure 7. Region oriented.**

The “Demanding” cluster (Figure 8) wants everything: Aosta Valley as region of origin, PDO certification, pasture as producer and low price. These consumers want Fontina cheese to be from Aosta Valley since that represents tradition, memory and customs; moreover, they also want PDO certification, in order to be reassured about food safety and they prefer Fontina cheese to be produced in pasture as they want to buy a tasty, natural product.

**Figure 8. Demanding.**

The “Official label confident” cluster (Figure 9) is the only cluster that does not consider PDO certified Fontina cheese to be industrial. PDO certification means safety, authenticity and fat, which is what these consumers are looking for when buying this typical cheese. Aosta Valley represents tradition and memory, values which they are not interested in, since they do not come to Aosta Valley very often and they are not emotionally linked to it.

**Figure 9. Official label confident.**

Finally the “Thrifty” cluster (Figure 10), is only interested in the price of Fontina cheese. These consumers consider Fontina cheese to be original only if it is produced in Aosta Valley, which embodies memories that may emanate from childhood. Both the region of origin and the pasture are perceived as guarantees of a traditional and tasty product. The pasture and PDO certification are considered to represent a guarantee of healthy food produced with respect for the environment and PDO certification stands for food safety.

**Figure 10. Thrifty.**

## **Discussion**

### ***Region of origin***

Overall, the region of origin is the most important attribute in buying Fontina cheese. In the food industry, territory has many meanings, it can stand for “health” and “safety”, it satisfies the “nostalgia” of a past time perceived as “real” and characterised by “wholesome” foods (Gilg and Battershill, 1998), it is associated to “authentic”, and “traditional” healthy food (Ilbery and Kneafsey, 1998). Consumers are often fascinated by a product claimed to be made in a certain region or country that stands out for its food production (Roth and Romeo, 1992), since it reminds them of values associated with that place and, maybe, pleasant times that they have spent there or would like to. The high utility score for Aosta Valley origin indicates that signalling the origin of Fontina cheese in a clear way increases the consumers’ willingness to buy, thus confirming H1.

### ***Protected designation of origin (PDO)***

PDO certification is the second attribute that impacts on consumers’ preferences. The PDO certification is considered a strong quality label (Fotopoulos and Krystallis, 2003) that ensures that a product has been made according to defined norms and processes, with defined raw materials, in a defined place, supporting H2.

PDO certification stands for food safety and health. This is consistent with research carried out wine consumers in Greece (Dimara and Skuras, 2003). European Union certifications, impact on consumers’ buying decisions, but not always in a strong positive way (Dimara and Skuras, 2001; Fotopoulos and Kristallis, 2002). The PDO label on cheese can sometimes be considered to be an artificial, industrial label, as highlighted by a member of ONAF:

“Consumers may consider the PDO label as a tool that tries to regulate in a strict way a production process that should be natural”.

The results of this study indicate that different segments can variously consider the presence of European certification either as a quality guarantee or alternatively as something artificial that contrasts with the values they are looking for.

### ***The producer***

The producer is an attribute whose importance varies according to the segment, decreasing while we move far from the region of origin. The producer's reputation is reflected in the perception of the products and a good reputation means that good values are associated with the products (Souiden, 2006). Building trust can be very difficult and time consuming, especially for SMEs. This may explain why only the consumers who live near the region of origin seem to care about where actually Fontina cheese is produced, while other consumers look for different key information. In the words of an MFCP executive:

“Foreign consumers often don't even know that Fontina cheese can be produced both in dairies and alpine pastures, they don't care who the producer is, but ask for a certified product made in Aosta Valley. Consumers from Aosta instead, pretend to know where the cheese has been produced and often prefer to buy it directly in a pasture they know and trust.”

The region of origin, the PDO certification and the producer have different weights when they are connected to different products and targets (Carpenter, 2004), as demonstrated by the cluster and discriminant analysis.

### ***Consumers' perceptions***

#### ***Cognitive distance***

The importance of PDO certification increases with increasing cognitive distance, confirming H3b. Consumers who know Aosta Valley well do not need PDO certification to be reassured about the quality of Fontina cheese, while other consumers consider the European label as the strongest and most reliable quality indicator. Moreover, some consumers born in Aosta Valley, who claimed to be purists and connoisseurs of Fontina cheese, said they would prefer Fontina cheese not to be certified. These consumers would prefer this product to preserve its natural essence, without being affected by the standards imposed by PDO certification. This is illustrated by a MFCP pasture owner:

“The picture of uncontaminated, pure and wild landscapes, often used to promote typical food from the Alps can contrast with PDO certification. When asking for a typical food product, in fact, the expected values are tradition and handcraft, which do not always seem to be well represented by the standardization and rules of European certification”.

The producer is very important for people who were born or actually live in Aosta Valley. These consumers usually know the producers, their reputation and the way they work personally. They can access information that is not easily available for people not living in Aosta Valley. Consumers born in Aosta Valley consider the producer to be much more important than PDO certification. Consumers who come to Aosta Valley but do not live there often do not know that Fontina can be produced both in dairies and pastures. Being unaware of this difference, they usually do not care who Fontina cheese is produced by and trust PDO certification to reassure them about the quality of Fontina cheese (H3d).

The region of origin has a high importance for consumers who live in Aosta Valley. They often claim that they would not be interested at all in buying a Fontina not made in Aosta Valley. Illustrating this finding, the MFCP executive argued that:

“We, I mean people from Aosta Valley, are very proud of our typical food products, in particular Fontina cheese. We fought not to let any more producers that operate outside our region call their cheese Fontina. It is our cheese and we won't even consider the possibility of buying a cheese labeled Fontina but produced elsewhere than here [Aosta Valley]”

The region of origin then has an importance very close to or less than PDO certification for consumers who do not live in Aosta Valley. The latter need to be reassured through PDO certification, which they consider to be the label that can guarantee the authenticity and quality of Fontina cheese (H3c).

### *Geographical distance*

The importance of PDO certification generally increases as the geographical distance from the region of origin increases, confirming H3b. Consumers from Aosta Valley consider PDO certification as the least important element; they know the product and do not care whether it is certified or not. Moreover some consumers from Aosta Valley prefer an uncertified Fontina cheese, as it seems to be more natural. They also assign high importance to who the producer is. Pasture is preferred and associated with higher quality.

On the other hand, the importance of the producer decreases as we move further from the region of origin (H3d). Consumers who live far from Aosta Valley consider alternative quality indicators.

The region of origin is one of the most important attributes in every case, but a decreasing trend can be identified in the importance of the region of origin while geographic distance increases (H3c). For Fontina cheese the region of origin is perceived as the main indicator of authenticity. This evidence demonstrates that the characteristics of Fontina cheese are perceived in different ways by different consumers, according to their distance from the region of origin of the product, thus confirming H3.

Different segments of consumers search for quality in different ways, according to cognitive and geographic distance, thus confirming H3a. The more that they know the product, the less they need to be reassured through official labels like PDO, which can be substituted by other indicators. Different consumers attribute different value and meaning to different characteristics of Fontina cheese.

The previous analysis demonstrated that some segments are more sensitive to the territory in which the product is made, whilst others are more sensitive to official certification such as PDO, depending on consumers' perceptions and wants.

## **Conclusion**

Any product is perceived by different consumers in different ways. Value derives from different attributes, according to the type of consumer. When value is based on the origin of the product that can be associated with the region, PDO, or the producer, these different attributes assume a different importance according to the distance (geographical and cognitive). PDO certification can be considered as a good tool to reduce the perceived distance for consumers living far from the region of origin but, on the other hand, it does not add value for people that do not perceive any cognitive distance.

In the case of Fontina cheese, we pointed out that the region of origin, PDO certification and the producer have different meanings to different consumers. Both the region of origin (H1) and the PDO certification (H2) strongly impact on consumers' quality perception; moreover, the geographical and cognitive distances have strong impact on the importance attributed to these characteristics (HP3). In particular, far from Aosta Valley, the importance of PDO certification increases. Consumers who live far from the region of origin prefer to buy a product with a strong, international and official guarantee, since they are unable to perceive other characteristics of Fontina cheese as efficient quality indicators.

Comparing the region, the producer and the certification value is relevant from a producer's perspective, in order to understand where and how to gain value and how to embed it into the total offering system. Producers and suppliers should take into consideration these differences to promote Fontina cheese in the most effective way and reach a wide target.

The results reflect, as well, the importance for policy makers of defining and focusing the quality signals of their products, taking into account geographical differences in consumers' perceptions. Fontina cheese is just one of the numerous certified products made in Italy and in Europe that could be further enhanced with specific marketing efforts. Thus, among the possible managerial implications, we highlight the need and the opportunity of communicating the values underlying the main product's attributes in a more efficient way. It may be useful to create differentiated promotional campaigns for Fontina cheese, focusing on different attributes depending on the residence of consumers. Regional symbols should be used in different ways to

address different targets. It would be appropriate, to cooperate with the main tourism operators (hotels, restaurants, ...), to promote Fontina cheese directly to tourists, providing them information about its history, its origin, and its connection with Aosta Valley. The PDO certification is then an attribute on which to leverage in order to encourage purchases far from the region of production. Retailers should be made aware of the importance of the PDO label for consumers, to enhance the product leveraging the certification. It might also be useful to promote market education to increase the knowledge of the characteristics of Fontina cheese outside Aosta Valley. Consumers often do not know the differences between Fontina cheese produced in pastures and Fontina cheese produced in dairies. Disseminating this information, for example through trade shows and culinary events, can help to increase awareness and interest in Fontina cheese and lead to product differentiation. Such strategies might also be useful to other certified food producers, who may be advised to evaluate the added value of certification in the various markets in which they operate in order to promote their products accordingly.

The main limitations of this paper arise from the single case study method, convenience sampling and limited sample size. However, the sample size satisfies the minimum recommended by Quester and Smart (1998) to ensure reliable results from statistical analysis. Convenience sampling was chosen in order to reach a useful variety of consumers, according to their sex, age and residence.

Therefore, further research is recommended, for example broadening to other food products and more countries.

Worldwide there are many typical food products that are not well-known outside their region of origin. Producers need to understand which are the most interesting attributes from consumers' perspectives to leverage them and increase the value of their products. Globalisation processes, with increasing freedom of movement of goods, have made available a much wider variety of products, creating a need for better consumer information. This need may be satisfied by offering consumers certified products or pointing out other core attributes, according to the characteristics of the target consumers.

Furthermore, while firms located in an area can benefit from the image of their home location, also the images of local businesses are key to the image of the place. Typical food products are core elements in the tourism package and can be considered as a supportive tool to secure a strong identity for the place (Kotler et al., 1999). At the same time the tourism brand attributes are linked to other products and services destined for export (Kotler et al., 1993). This strong relation cannot be ignored while defining place and destination branding strategies, but should be exploited to add value to the whole tourism offer.

Typical food products became a core element of the global offer of a tourism destination. In a destination perspective, the products and services facilitating a tourism experience should be employed to develop a country brand across different industries, leveraging the country brand through a tourism destination brand (Gnoth, 1998, 2002). Certification labels are useful to help tourists recognising the authentic and traditional products and, as outlined by Gnoth (2002) in his theoretical model of the tourism system, the tourism products and country brands are operationalized in order to link the tourism experience with the products and services that facilitate it. PDO label can deliver a high added value to the food and tourism offering and this potential should be exploited. Further research may focus on how this contribution could be delivered to reach different targets and how to promote a destination leveraging on its core products.

Numerous authors have studied the contribution of typical food products to destination branding (Bruwer, 2012; Hudson and Ritchie, 2009; Lee and Arcodia, 2011), but to our knowledge, none have considered the difference in perception of tourists living closer or further from the destination. This paper may be a starting point for future research aimed at throwing light upon the relation between distance and value perception. Place branding theory should consider these results and focus on the importance of these core elements (certification label, food origin, producer) to build up, create, deliver and communicate the image of a destination.

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## Tables

Table 1. Attributes and levels.

Attributes	Region of origin	Certification	Producer	Price per 250g
	Aosta Valley	PDO	High mountain pasture	3 €
Levels	not Aosta Valley	absent	Dairy	5 €
				7 €

Table 2. Profiles.

Profile	Region of origin	Certification	Producer	Price for 250g
1	Aosta Valley	PDO	Dairy	5 €
2	not Aosta Valley	PDO	High mountain pasture	7 €
3	Aosta Valley	PDO	High mountain pasture	3 €
4	not Aosta Valley	absent	High mountain pasture	5 €
5	not Aosta Valley	absent	Dairy	3 €
6	Aosta Valley	absent	Dairy	7 €
7	Aosta Valley	absent	High mountain pasture	3 €
8	not Aosta Valley	PDO	Dairy	3 €

Table 3. ANOVA.

ANOVA						
	Cluster		Error		F	Sig.
	Mean Square	df	Mean Square	df		
PDO	34,795	4	,297	215	116,986	,000
pasture	6,147	4	,396	215	15,532	,000
VdA	37,210	4	,357	215	104,225	,000
3 euro	24,069	4	,252	215	95,606	,000
5 euro	7,313	4	,274	215	26,679	,000
7 euro	18,916	4	,289	215	65,474	,000

Table 4. Values.

Values
Tradition
Genuine food
Safety
Souvenir
Authenticity
Childhood memory
Parties
Natural food
Taste
Fat
Industrial
Quality
Ethics
Healthy
Respect for the environment

Table 5. Sample description.

Table 5. Sample description.							
		Frequency	Percent				
<b>Sex</b>	M	93	42.3				
	F	127	57.7				
<b>Submission place</b>	Aosta	110	50.0				
	Milano	75	34.1	<b>Residence</b>	Aosta	50	22.7
	Lugano	35	15.9		Greece	35	15.9
			Lugano		25	11.4	
			Milano		79	35.9	
			North of Italy		17	8.0	
			Europe		12	5.0	
			Russia		2	.9	
<b>Profession</b>	housewife/ retired	23	10.5				
	student	52	23.6				
	dealer/ craftsman	18	8.2				
	self-employed	28	12.7				
	manager/entrepreneur	24	10.9	<b>Age</b>	18 to 25	50	22.7
	employee/teacher	63	28.6		26 to 35	42	19.1
	worker	10	4.5		36 to 45	44	20.0
	farmer	1	.5		46 to 55	41	18.6
	unemployed	1	.5		56 to 65	23	10.5
			over 65	20	9.1		

Table 6. Conjoint analysis results on the whole sample.

		Utility Estimate	Importance Values
<b>Certification</b>	PDO	1.251	34.97%
	absent	-1.251	
<b>Producer</b>	pasture	.289	8.07%
	dairy	-.289	
<b>Region of origin</b>	Aosta Valley	1.526	42.66%
	Not Aosta Valley	-1.526	
<b>Price</b>	3 euro	.486	14.31%
	5 euro	.051	
	7 euro	-.538	
(Constant)		4.394	

Table 7. Means of importance by segments.

Attributes	whole sample n=220	guarantee seeking n=34 15%	region oriented n=52 24%	demanding n=40 18%	official confident n=64	label thrifty 29% n=30 14%	Sig.
<b>PDO certification</b>	34.969	34.071	7.330	29.205	67.835	18.150	.000
<b>Producer</b>	8.067	7.257	13.457	11.049	.167	18.613	.000
<b>Region of origin</b>	42.655	43.173	65.317	38.353	24.763	17.457	.000
<b>Price</b>	14.308	15.498	13.895	21.393	7.234	45.780	.000

Table 8. Utilities by segments.

Attributes	Levels	guarantee seeking	region oriented	demanding	official label confident	thrifty
		n=34 15%	n=52 24%	n=40 18%	n=64 29%	n=30 14%
Certification	PDO	1.018	.322	1.297	2.381	.654
	absent	-1.018	-.322	-1.297	-2.381	-.654
Producer	pasture	-.217	.591	.491	.006	.671
	diary	.217	-.591	-.491	-.006	-.671
Region of origin	Aosta Valley	1.290	2.870	1.703	.869	.629
	Not Aosta Valley	-1.290	-2.870	-1.703	-.869	-.629
Price	3 euro	-.505	.699	.396	.253	1.861
	5 euro	.083	-.176	.752	.003	-.422
	7 euro	.422	-.522	-1.148	-.255	-1.439

Table 9. Test of equality of group means.

	Wilks' Lambda	F	df1	df2	Sig.
tradition	.845	59.896	2	655	.000
<b>genuine</b>	<b>.989</b>	<b>3.564</b>	<b>2</b>	<b>655</b>	<b>.029</b>
safety	.816	73.949	2	655	.000
souvenir	.881	44.293	2	655	.000
authenticity	.957	14.719	2	655	.000
childhood memory	.891	39.887	2	655	.000
party	.876	46.181	2	655	.000
natural	.899	36.736	2	655	.000
taste	.929	24.936	2	655	.000
fat	.975	8.477	2	655	.000
industrial	.883	43.373	2	655	.000
<b>quality</b>	<b>.993</b>	<b>2.357</b>	<b>2</b>	<b>655</b>	<b>.095</b>
<b>ethics</b>	<b>.996</b>	<b>1.282</b>	<b>2</b>	<b>655</b>	<b>.278</b>
healthy	.982	6.172	2	655	.002
respect for the environment	.971	9.880	2	655	.000

Table 10. Functions at group centroids.

Functions at Group Centroids		
Label	Function	
	x	y
Aosta Valley	.848	.059
PDO certification	-.915	.826
Pasture	.072	-.889

## Figures

Figure 1. Relative importance according to cognitive distance.

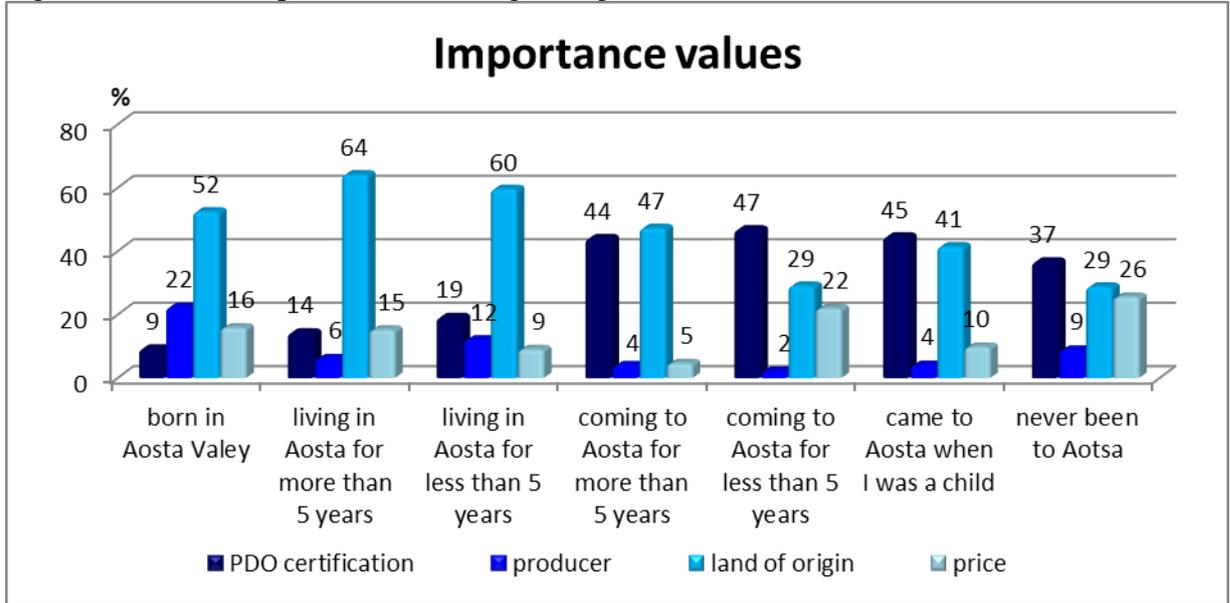


Figure 2. Relative importance according to geographical distance.

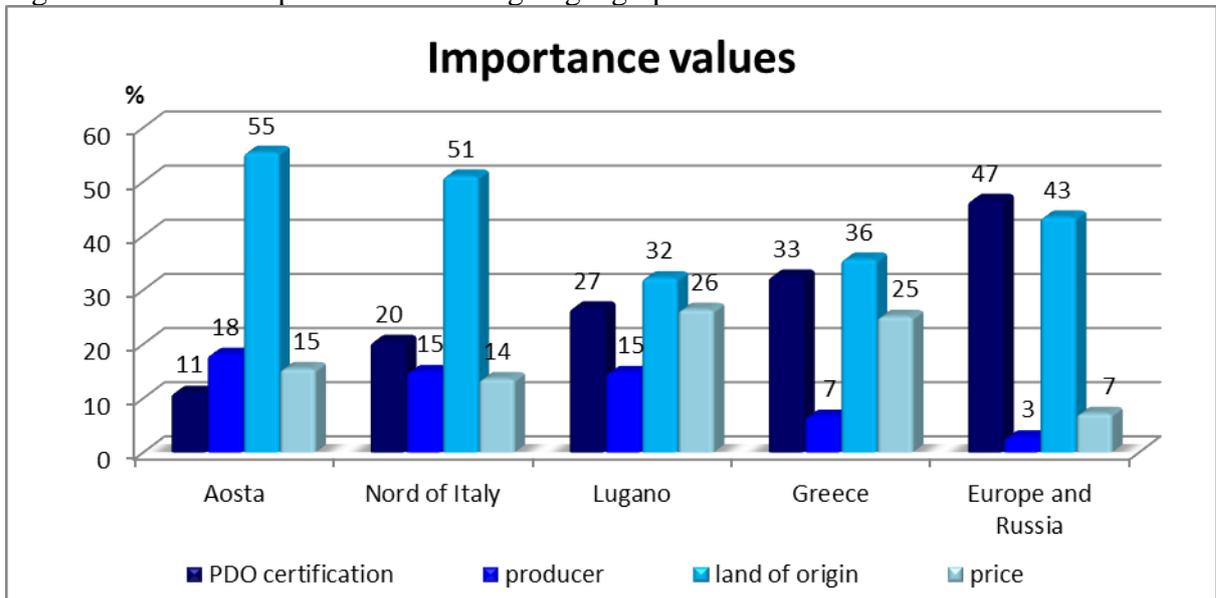


Figure 3. Relative importance in each cluster.

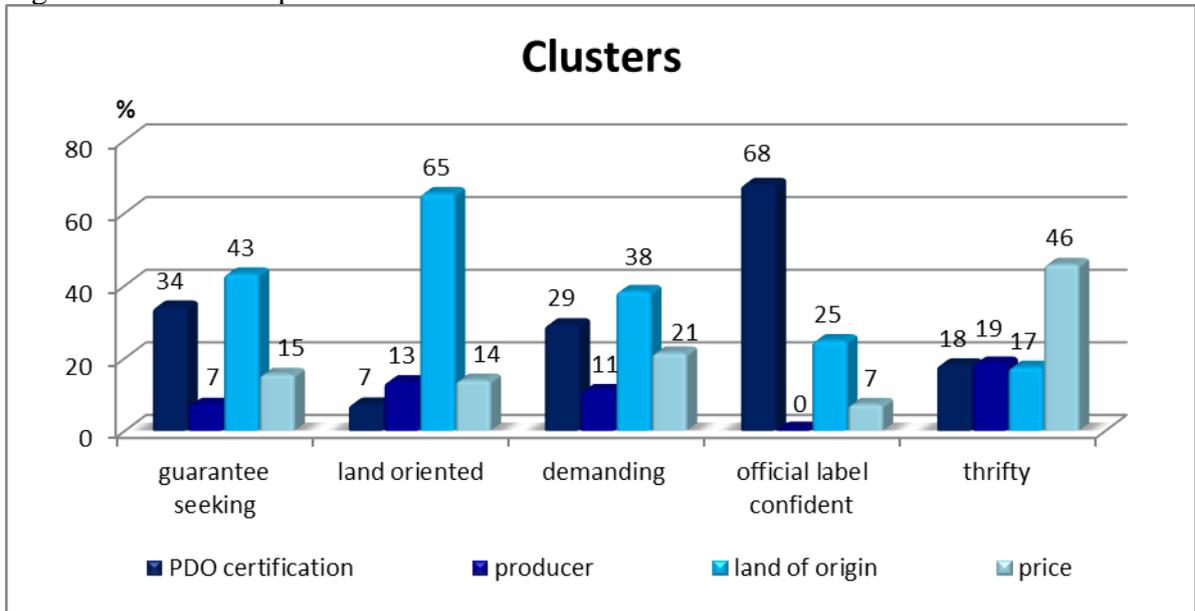


Figure 4. Utility in each cluster.

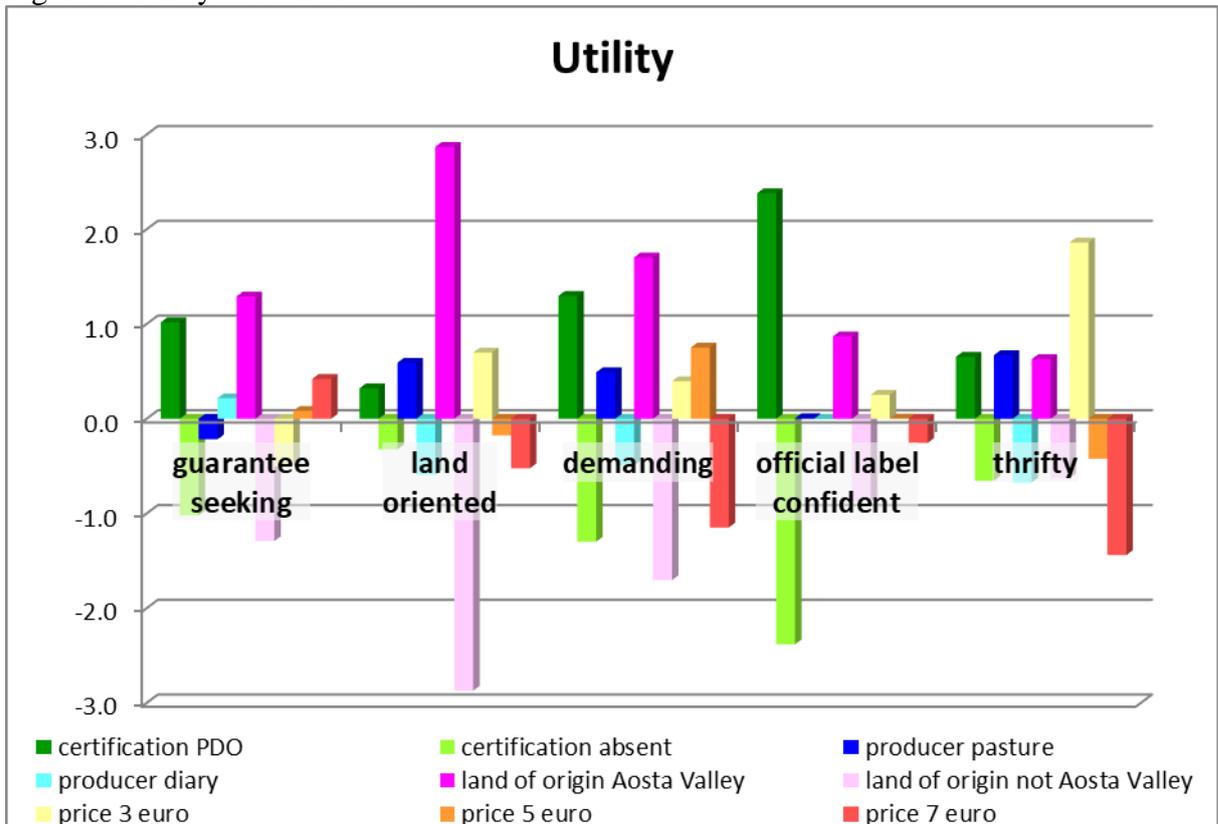


Figure 5. Discriminant analysis.

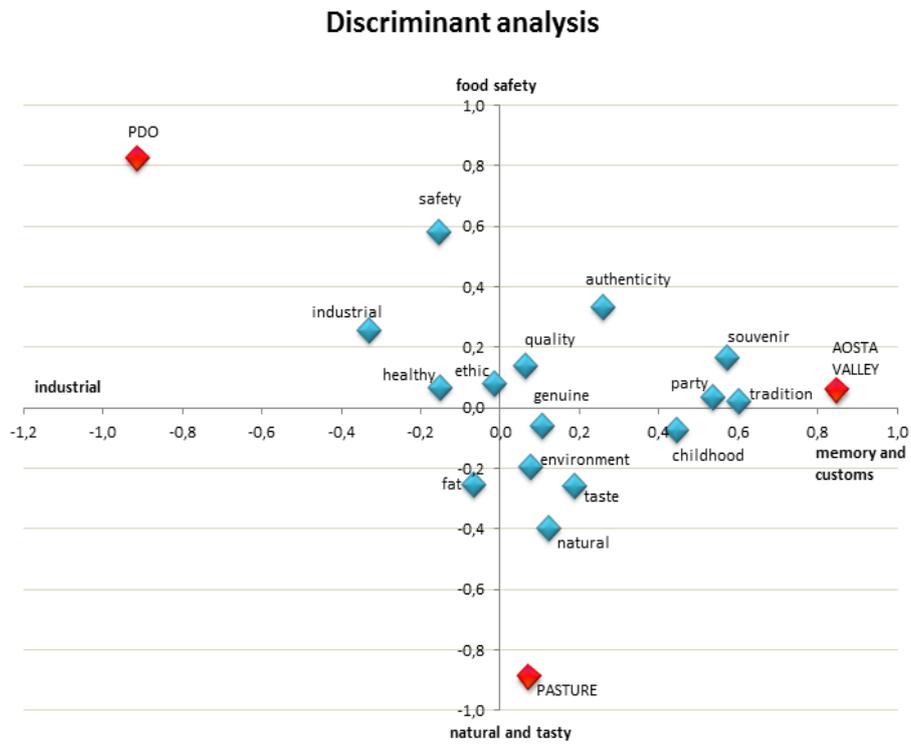


Figure 6. Guarantee seeking.

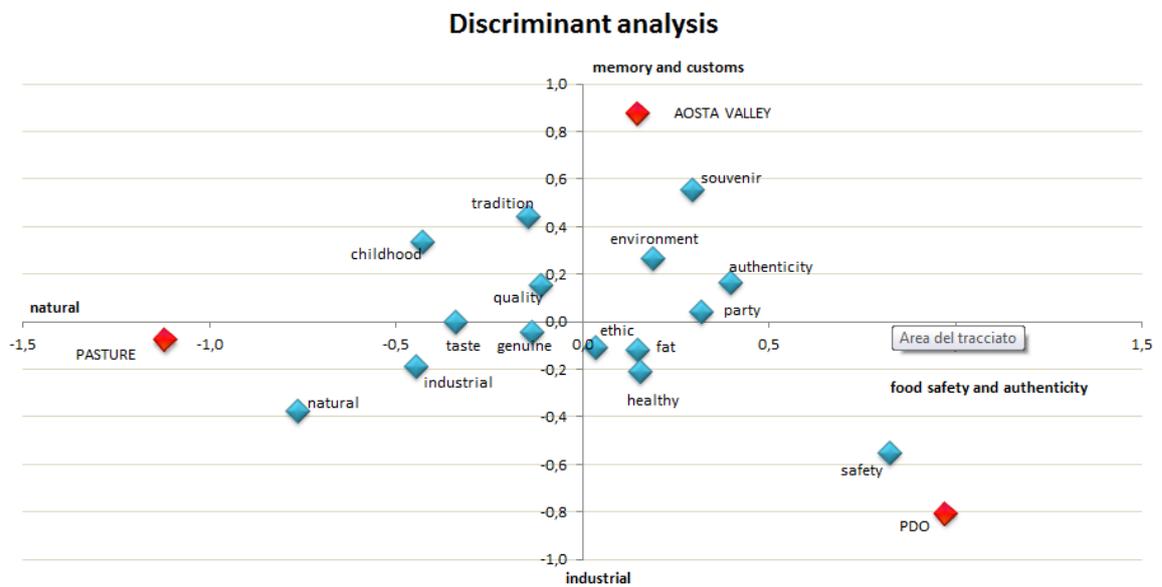


Figure 7. Region oriented.

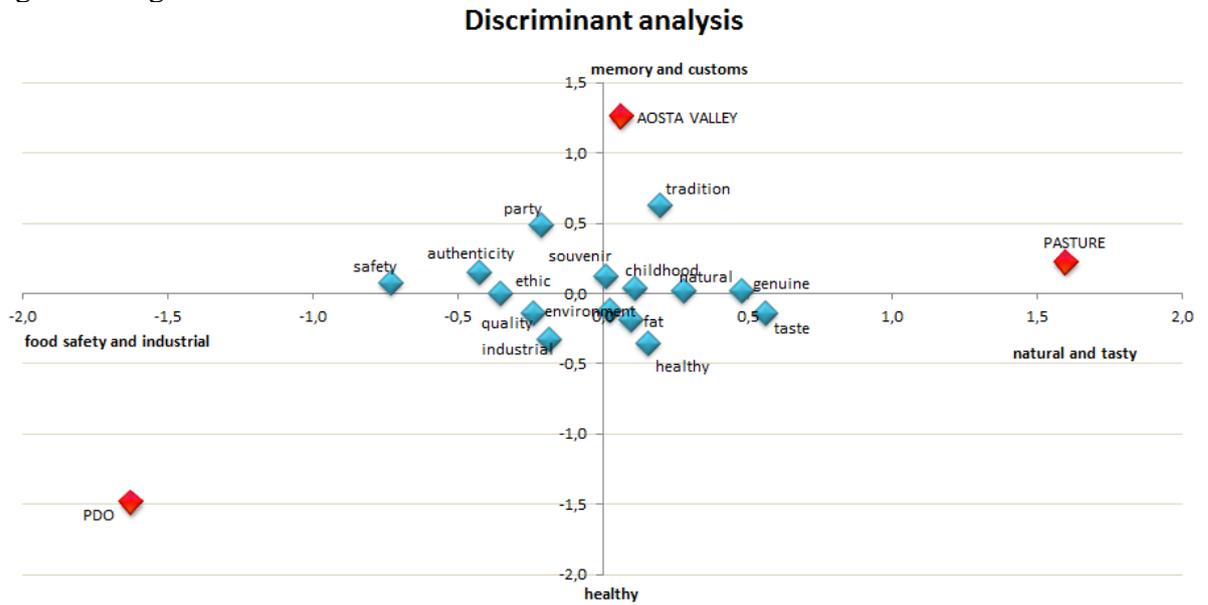


Figure 8. Demanding.

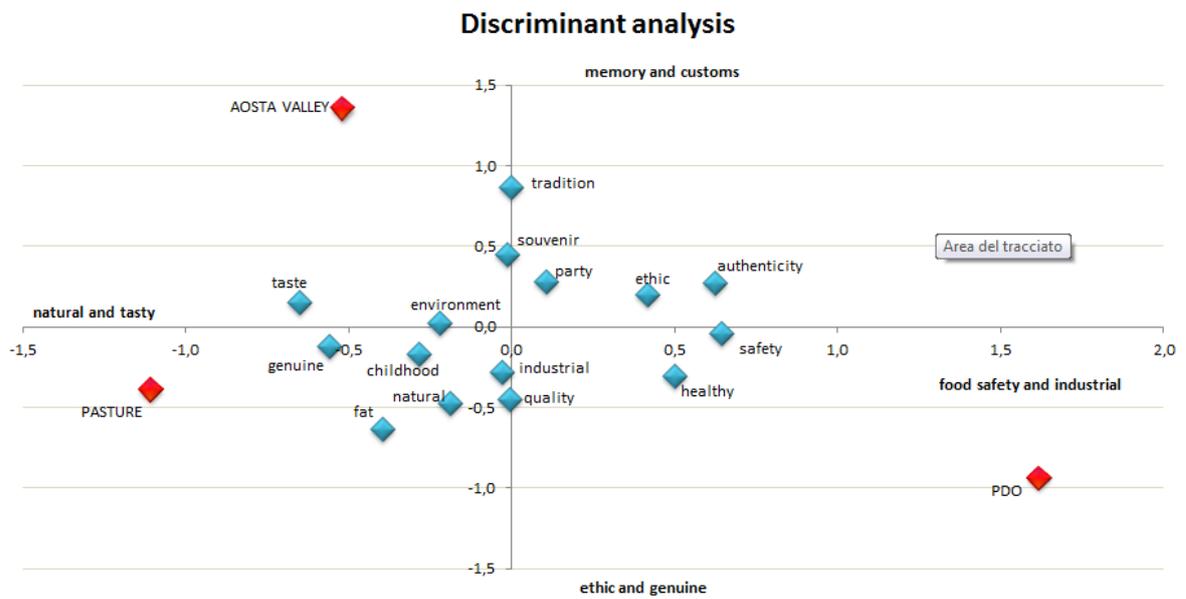


Figure 9. Official label confident.

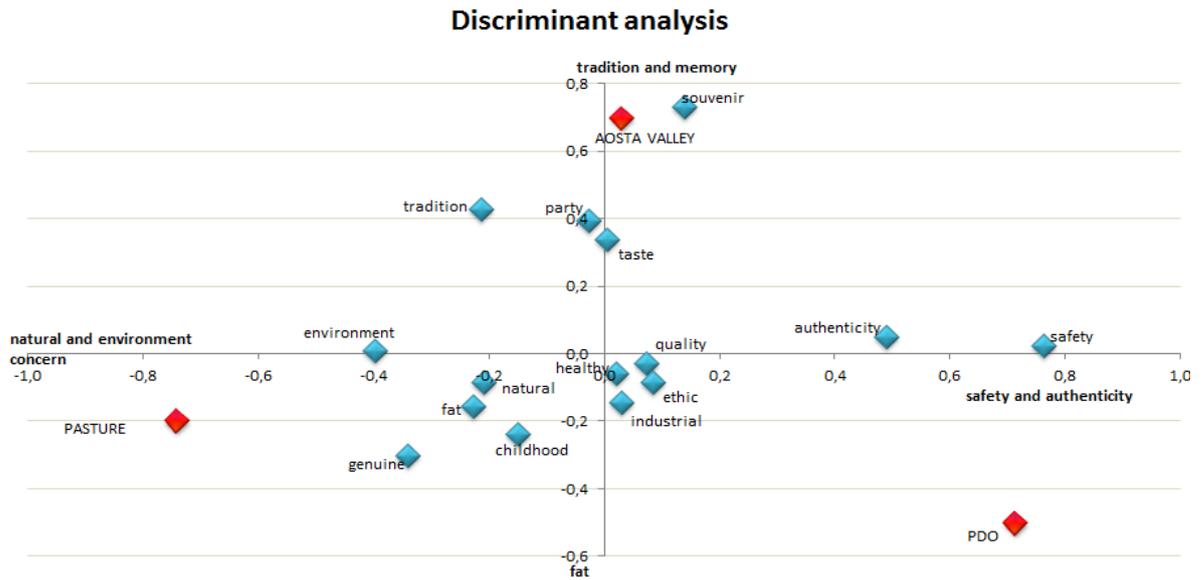


Figure 10. Thrifty.

