

National Brands versus Private Labels versus Niche Products: a graphical representation of consumers' perception

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Abstract

The more consumers' needs evolve, the more food market's stakeholders require information in order to make rational choices responding to consumption patterns' changes. In the present research the perception of well-established and niche food products is discussed. Five macro-categories of food have been considered: national brands, private labels, organic products, Protected Denomination of Origin products and local food. After decades of diversification strategies, we analyze similarities and dissimilarities between products on the basis of their perceived quality.

The survey was conducted in Milan (Italy) between May and July 2014, collecting information about 360 adult consumers. Perception of products have been evaluated asking to interviewees to pick from a list of attributes, which ones they attach to each products. Data are elaborated through simple correspondence analysis, obtaining a perceptual map, which provides a graphical representation of links between attributes and products.

Results suggest that consumer perceive national brands and private labels as similar and organic and local food distinctively differentiated by other products for sale in food market, but do not provide a completely reliable interpretation for PDO products. National brands and private labels remain the most convenient food, organic food are perceived as healthy, environmental-friendly, expensive and respectful of animal welfare, while local food is represented as traditional, fair and flavorful. No differences have been found controlling for gender, while consumer who are used to direct-sale recognize to PDO products the same characteristics of local food.

Keywords

Local products, national brands, private labels, product differentiation, perceptual mapping

Topics

Value creation and innovative marketing strategies

Marketing strategies for niche products.

New trends and directions in food consumption

Alternative food networks and civic food networks: re-connecting the consumers and the producers for a sustainable food system.

JEL codes: D12; M3

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1. Introduction

Due to varying supply and demand, the market for foodstuffs is highly heterogeneous in terms of products for sale. Consumers have different needs deriving from external variables as well as their own personal characteristics and experiences. The food market thus presents different consumption patterns both between countries (Nielsen *et al.*, 1998; Erdem *et al.*, 2004; Altintzoglou *et al.*, 2011) and within the same country, which in turn depend on the characteristics of the consumers (Brunso *et al.*, 2009; Cosmina *et al.*, 2012) and products (Vermeir and Verbeke, 2006; Giskes *et al.*, 2007; Gaviglio and Demartini, 2009). On the other hand, producers are profit-driven and compete in the food market in an attempt to ensure consumers choose their products rather than similar products of another producer. Finally, the natural characteristics of ingredients used and technologies applied in food supply chains also play a part in product innovation.

These variables make up a very complex system, where product diversification strategies have evolved in order to react to consumers and market changes, and competition has shifted from being price-based to quality-based (Henson and Reardon, 2005; Brynjolfsson, 2006; Henson, 2008), and from production-oriented to consumer-oriented. In this sense, we have identified three phases in the evolution of differentiation strategies (Table 1):

- (i) *Industrial phase*: specialized producers used marketing strategies to impose their brand as a “high-quality” cue for their product;
- (ii) *Retailers phase*: started with the first private labels designed for price competition and fidelity programs, which still have an important role in driving the evolution of the food market; and,
- (iii) *Consumer phase*: based on two new phenomena: the discovery of niche-markets which represent new opportunities for differentiation, and the increase in the importance of food scares after the BSE crisis, which stimulated firms and retailers to develop internal policies to manage safety issues and generally protect themselves from possible adverse reactions by consumers.

Consumer analysts played a key role in helping producers and retailers to design their differentiation strategies by providing information on how consumers perceive different

products. Nonetheless, despite the amount of related literature, this issue is far from have being exhaustively discussed.

In this paper, we outline the results of a survey on consumer perception of five macro-categories of food products in order to establish: (i) which cues they attach to each category; (ii) if and how socio-demographic and buying habits influence perception; and, (iii) how and to what extent products are differentiated. National brands and private labels were considered among macro-categories of well-established food products; organic, Protected Denomination of Origin (PDO - certified regional specialty food products) and local food were selected to represent macro-categories pertaining to established or emerging niche products. The experimental design checks for different perceptions due to different consumer characteristics, and in this paper, we discuss how gender and sale channels affect the perception of food.

Table 1. Characteristics and drivers of food market segmentation

<i>Definition</i>	<i>Characteristics and drivers</i>	<i>Novelty</i>	<i>Relevant strategy and firm policy</i>
<i>Industrial phase</i>	Specialized firms in producing food introduce brands	<ul style="list-style-type: none"> • From undifferentiated food to differentiated products • Promotion campaigns 	The aim of differentiation is being considered “the best” among competitors
<i>Retailers phase</i>	Retailers, which benefit of being in direct contact with consumers, create their own private label, they guarantee for food quality and compete in term of sale price	<ul style="list-style-type: none"> • Retailers become producers • Price competition with producers • Extended fidelity programs 	The aim of private label is emulating branded product in order to satisfy needs of consumers at a low price
<i>Consumer phase</i>	Consumers show positive willingness to pay for added-value products and react adversely to food sanitary crisis and/or environmental/animal welfare issues tied to food production	<ul style="list-style-type: none"> • Discovering of niche-markets • Producers (firms and retailers) act in order to prevent adverse choice 	The aim of differentiation is satisfying new emerging market segments and manage safety and reputational risks

Traditionally, product categories have been treated alone or compared with similar products, focusing on differences and similarities between national and store brands, or between innovative niche products. Consequently, for what we believe is the first time, we present a comprehensive comparison between the most important categories of food. Our findings thus

contribute to consumer science and have clear implications in the fields of agro-food retail and production management, with particular reference to marketing.

The rest of paper is organized as follows. Section 2 reviews the literature in relation to the perception of the products considered in our survey. The questionnaire is presented in Section 3 along with sample and statistical methodologies, while the results and discussion are in Section 4. Finally, Section 5 outlines our conclusions along with some possible limitations of the study.

2. Consumer Perceptions of Traditional and Niche Food Products

Consumer economists consider products as a set of intrinsic and extrinsic attributes that contribute to create the utility they possess. Lancaster's modern theory of consumer demand (1966) states that the utility a good can satisfy is a function of the utilities that consumers recognize in its attributes. One of the most important implications of considering a food product as the sum of its perceivable attributes is that consumer perception is key in determining the value of products. We thus searched in the literature for studies containing information about the relevant attributes pertaining to the five product categories we consider in the survey.

2.1. National brands

Most of the literature on national brand products is restricted to marketing, and tends to focus on brand value management (Bredahl, 2004; Guinard *et al.*, 2001). Private interests of firms stimulated such studies; consequently, what is primarily important for producers is to manage their brands to catch consumer attention, preference and loyalty, and to protect their products from any type of competition.

Although marketers are the most interested in these types of studies, consumer scientists can also use them. For example, Keller (1993; 2001) suggested that brands should be managed through a customer-based brand equity framework. Keller proposed that brand equity should be assessed by studying the effect of brand knowledge on consumer reactions, and that consumer-based brand equity occurs when a consumer recognizes some unique features in particular products as a result of recalling the brand.

Moving now from marketing to consumer sciences, there is also research that has proved the effects of private brands in consumers' perceptions of products. Di Monaco *et al.*, 2004 tested the expectations of different types of pasta given certain national (i.e. Italian) brands and found that stated perception of products varies according to the evaluation of the related brand, while the ratings for sensory characteristics were unaffected by brands. The influence of brands on

consumer perception and choices has also been proved for canned (Vranešević and Stančec, 2003) and fresh meat products (Bredahl, 2004), and in children tasting branded or unbranded fast foods (Robinson *et al.*, 2007). Exposure to a brand and acting on consumer knowledge of this brand, has also been proved to be a determinant of consumer choice (Robinson *et al.*, 2007; Fitzsimons *et al.*, 2008; Pohjanheimo and Sandell, 2009; Boyland and Haldford, 2013).

2.2. Private labels

Private labels emulate traditional national brands. They were introduced in the late nineteenth century (Fitzell, 1982), and over the last two decades have gained an increasing share of food markets (Akbat and Jones, 2005; Ailawadi *et al.*, 2008) with a growth rate twice as high as that for national brands (Materson, 2007). Their expansion has been explained by the attractiveness they have for retailers in terms of gross margin increase (Erdem *et al.* 2004), negotiation opportunity with manufacturers and well-known producers (Batra and Sinha, 2000; Sayman and Raju, 2004), ability to generate both store traffic (Pauwels and Srinivasan, 2004) and store loyalty (Sudhir and Talukdar, 2004; Kumar and Steenkamp, 2007; Ailawadi *et al.*, 2008), and greater control over shelf space (Batra and Sinha, 2000). Considering their success, most of the scientific interest in private labels is in terms of the impact they have on food markets with particular reference to national brands, their management and consumer perception.

Price competition was effective in the very early stages of private labels; but at that time store brands came together with low standards (Steiner, 2004). That strategy was abandoned in the 1980s (Wellman, 1997), when consumers perceived low quality in the low price of private labels (Hoch *et al.*, 2000) and felt that a premium price for national brands would be acceptable as payment for quality assurance (Sethuraman and Cole, 1999; Steenkamp *et al.*, 2010).

Changes in management of private labels now seem to be working effectively on consumer perception. In fact, DelVecchio, 2001 notes that the perception of the quality of private labels is positive among those consumers that use brands as signal of quality. Garretson *et al.*, 2002 supported these findings by highlighting the existence of a segment of smart-shoppers that are likely to shift from bargains from national brands to private labels because of their self-reported high value-consciousness. Furthermore, Akbat and Jones, 2005 proved that generally private labels are strong substitutes for national brands, while national brands do not perform in the same way with relation to store brands.

2.3. Organic food

Due to the economic importance of organic products in food markets, many studies have been published on the motivation of consumption and the attributes that consumers attach to this category of goods. Although these niche products derive from environmental-friendly processes enhanced by certification schemes, their perception is multifaceted, involving many positive attributes and segmented by the socio-economics and emotional traits of consumers (Hamm and Gronefeld, 2004; Falguera *et al.*, 2012). Without taking into account any ecological factors, consumer analysts have found that purchasing organic food is associated with buying healthy (Pieniak *et al.*, 2010; Pino *et al.*, 2012;) and high-quality products (Chinnici *et al.*, 2002).

Other attributes have also been tested. Chinnici *et al.*, 2002 segmented the purchasers of organic products and found that this category is associated with both novelty and tradition. Makatouni, 2002 proved the relevance of animal welfare in affecting consumer choice. Personal attitudes and consumer values are also key drivers for the consumption of organic products. Cicia *et al.*, 2002 analysed alternative lifestyles, which involve considering the consumption of organic products as an ethical/fair choice, which evolves into the concept of citizen-consumership in Seyfang, 2006. Consumers also show hedonistic and egoistic behaviour. Some studies have described consumption with reference to the pleasure and sensuous satisfaction in how organic products taste (Fotopoulos *et al.*, 2002; Zanolli and Naspetti, 2002; Khyllberg and Risvik, 2007). In addition, perceived health benefits are better predictors of organic consumption than concerns regarding environment and animal welfare (Magnusson *et al.*, 2003).

Despite the number of studies, reviews on this issue have recommend further investigations (Magkoset *al.* 2003; Hughner *et al.*, 2007; Aertsens *et al.*, 2009). Some findings suggest a very high level of segmentation in the consumers of organic products. Consumers are primarily influenced by a recognition of the health, environmental and hedonistic attributes, but the importance of each attribute changes on the basis of how much organic food is purchased (Saba and Messina, 2003; Krystallis *et al.*, 2008), the structure of the family (Thompson and Kidwell, 1998), self-reported perception of risk-related issues (Saba and Messina, 2003), and personal values (Chrysohoidis and Krystallys, 2005).

2.4. Certified regional specialty foods

Producers whose products are certified with labels such as the European Protected Denomination of Origin (PDO) and Protected Geographical Indication (PGI) must adhere to guidelines in order to guarantee a specific product quality. Through a labelling regulation both consumers and producers can take advantage of this scheme. Consumers benefit from a certified

standardized method of production, while manufacturers protect their products from emulation and unfair competition due to information asymmetry. In theory, from a producer's point of view, labelling represents a marketing differentiation and protection tool, but the functionality of the certification scheme relies on consumer perception and appreciation (Van Ittersum *et al.*, 2007).

Despite the numerous studies and the economic importance of labelling and added-value products, little attention seems to have been directed to the cues consumers associate with this category of food (Dimara and Skuras, 2003; Van Ittersum *et al.*, 2007).

Our analysis of the literature reveals that consumers associated certified regional speciality foods with high standards (Van Ittersum *et al.*, 2003), with tradition (Verlegh and Steenkamp, 1999; Dimara and Skuras, 2003), with a pleasant taste (Platania and Privitera, 2006; Vanhonacker *et al.*, 2010), and with safety particularly in terms of traceability (Dimara and Skuras, 2003). However, Gaviglio *et al.*, 2014 underline that even typical well-known food may still lose out to a better perceived substitute. Another attribute of typical regional products is related to the fairness/solidarity of buying them in order to sustain regional manufacturers (Van Ittersum *et al.*, 2007; Verbeke *et al.*, 2012). In this case, the perception of products and determinants of consumption varies among consumers due to socio-demographic characteristics and specifically on the basis of knowledge of the area of production (Van der Lans *et al.*, 2001).

2.5. Local food

Many definitions have been proposed regarding exactly what makes a food "local" (Hand and Martinez, 2010). The term would seem to imply that the food supply chain from farmers to consumers must be restricted to a particular region, in reality, many "local" products come from elsewhere than what common sense would define as being "local places" (Coley *et al.*, 2009). In this sense "local" has been argued to be a misleading term, leading consumers to believe that products are different from what they actually are (Born and Purcell, 2006).

Scientific analysis shows that both the rural system and consumers can benefit from these niche products (Sonnino, 2010). One solution is thus to identify local food as those products that incorporate a distinctive set of attributes, generally tied to sustainability of agricultural production (Seyfang, 2006). The role of consumer perception is then essential in understanding which exactly these positive cues are.

There are two fundamental descriptors of local production: i) the unique intrinsic and extrinsic quality of the products, and ii) the social embeddedness due to the creation of alternative agro-

food markets. In terms of quality, consumers perceive local products as more traditional (Bessi re, 1998), fresher (Sanderson *et al.*, 2005; Guthrie *et al.*, 2006; Zepeda, 2009) and flavourful (Winter, 2003) than other food, while environmental friendliness and low prices are less evident traits of local produce (Cavicchi and Rocchi, 2011). On the other hand, social embeddedness refers to the special links that have been found among local supply chain stakeholders. The direct sale formula, typical for local food, creates a relationship between producers and consumers which cannot be explained just within an economic rationality. This connection starts with the consumer's idea of buying local products to support local economies and the trust they have in producers (Seyfang, 2006; Lockie, 2009). Finally, local food consumption has been proved to bring about positive changes in participants, such as a new pleasure in the purchasing experience as well as knowledge about agro-food systems (Santini and Paloma, 2013).

3. Materials and Methods

3.1. Questionnaire and sample

The survey was conducted in the urban area of Milan (Italy) between May and July 2014, collecting information about 360 adult consumers. Our questionnaire was organized into three sections regarding: (i) socio-demographic profiles of interviewees; (ii) consumption habits; (iii) consumer perception of five food macro-categories.

The sample was divided into different numbered classes using the quota sampling method (Levy and Lemeshow, 2013) by stratifying consumers by gender, age, and consumption habits (Table 2). Given that we were interested in controlling for different perceptions between organic/local product consumers and traditional consumers, data were collected with face-to-face questionnaires at traditional large retail chains (LRCs) and organic specialized stores (SPEs). For local products, we emailed members of Community Supported Agriculture (CSA) programs and asked them to complete the questionnaire online. We used the same number of questionnaires for males and females, and for sale channels. There was a ratio of 40/60 between younger (18-35 years old) and older (36-65 years old) consumers.

Table 2. Sample quotas used for the survey

	<i>Large Retail Chains (LRC)</i>		<i>Organic Specialized Store (SPE)</i>		<i>Community Supported Agriculture (CSA)</i>		Total
	Male	Female	Male	Female	Male	Female	
<i>18-35 years old</i>	24	24	24	24	24	24	144
<i>36-65 years old</i>	36	36	36	36	36	36	216
Total	LRS=120		SPE=120		CSA=120		360

3.1.1. Codification of products and choice of attributes

One of the most delicate issues in the analysis was choosing the types of products and the list of attributes the interviewees could pick from to describe them. In order to collect reliable and informative data we had to select categories of food and attributes that are representative of the heterogeneity of the food market. There was a myriad of possible choices - Tables 3 and 4 show the solution adopted.

The selected five food product categories can be divided into two subsets for conventional food (national brands and private labels), and differentiated niche products, i.e. organic, certified regional specialities and local food. We used fifteen attributes, selecting from cues that normally facilitate or inhibit consumption of goods (price and availability), positive and negative attitudes (food safety, healthy, environmental and ethical issues), perceived overall quality, and perception of flavour.

Table 3. Type of products

Product	Code	Description
<i>Conventional products</i>		
National brands	BRN	Well-known branded products
Private labels	PVT	Products whose brands are owned and controlled by retailers
<i>Niche products</i>		
Organic products	ORG	Certified organic food products
Protected Denomination of Origin	PDO	Certified regional speciality food
Local products	LOC	Food produced within a short food supply chain

Table 4. Attributes used for analysis

Code	Attributes	Description
awe	Animal welfare	Respectful of animal welfare
che	Low price	Cheap
eco	Environmental friendly	Respectful of environment
fai	Fair	Supporting the local agricultural economy
fla	Flavorful	Good taste and flavor
hea	Healthy	Good for the health
hfi	Hard to find	Difficult to find for sale
hpr	High price	Too expensive
hqu	High quality	High overall quality
lqu	Low quality	Low overall quality
lch	Lack of choice	Low range of product for sale
nut	Nourishing	High nutritional quality
saf	Safe	Safe and controlled, respectful of the regulations
tra	Traditional	Respectful of local traditions, seasonal
wch	Wide choice	Wide range of product for sale

3.1.2. Socio-demographic characteristics of the sample

Table 5 reports the characteristics of the respondents. Considering the whole sample, interviewees have quite a high level of education: 136 and 196 respondents had a high school diploma or a degree respectively, and 7.8% of the sample only had a middle or elementary school diploma. This skewness was even greater regarding buyers at organic specialized stores, where 62.5% had a degree, while at large retailers buyers had higher than the sample average values for holders of middle school and high school diplomas. There were differences in the sample in terms of the number family members (due to presence of children in the household). Individuals and couples with few or no children represent the majority of the people that buy at specialized stores or use CSA programmes, while for financial reasons larger families clearly prefer large retail chains as suggested by Baltas and Papastathopoulou, 2003.

Table 5. Socio-demographic characteristics of the sample by sale channel

	LRC	SPE	CSA	Total
	No. (%)	No.(%)	No. (%)	No. (%)
<i>Education</i>				
Elementary	5 (4.2%)	1 (0.8%)	0 (0.0%)	6 (1.7%)
Middle School	13 (10.8%)	2 (1.7%)	7 (5.8%)	22 (6.1%)
High School	45 (37.5%)	42 (35.0%)	49 (40.8%)	136 (37.8%)
University Degree	57 (47.5%)	75 (62.5%)	64 (53.3%)	196 (54.4%)
<i>Household size</i>				
1	14 (11.7%)	31 (25.8%)	21 (17.5%)	66 (18.3%)
2	31 (25.8%)	45 (37.5%)	40 (33.3%)	116 (32.2%)
3	28 (23.3%)	24 (20.0%)	24 (20.0%)	76 (21.1%)
4	35 (29.2%)	15 (12.5%)	26 (21.7%)	76 (21.1%)
5+	12 (10.0%)	5 (4.2%)	9 (7.5%)	26 (7.2%)
<i>Children in the household</i>				
0-12 years	24 (20.0%)	14 (11.7%)	29 (24.2%)	67 (18.6%)
13-18 years	18 (15%)	7 (5.8%)	9 (7.5%)	34 (9.4%)

3.2. Simple correspondence analysis and perceptual mapping

Several methods have been used to study the attributes consumers attach to products. Choosing the right one is a matter of identifying the trade-offs of each method on the basis of the experimental aims and constraints. In order to evaluate consumer perceptions of the five macro-categories of products, we used a multivariate data reduction technique, namely simple correspondence analysis with a symmetric normalization model (Lebart *et al.*, 1984) performed with IBM SPSS 21.0, which graphically represents the market positioning of each category on the basis of qualitative attributes.

This technique is simple in terms of data collection and elaboration: interviewees just have to pick from a list of attributes the ones they think represent the product and many software packages can perform the statistical analysis (Beh, 2004). Unfortunately, its results suffer in terms of quantitative representation. The outputs that simple correspondence provides come from translation of contingency table and are represented through points in Cartesian planes, whose scales relate to the table of origin (Hoffman and Franke, 1986). In this sense, every bi-plot stands by itself and, formally, should not be compared with others in quantitative terms, though qualitative interpretations can be made (Gaviglio *et al.*, 2014).

The bi-plots constructed to compare products are called perceptual maps by consumer analysts and marketers; they represent the correspondences (or associations) between the categories in rows and columns (Kuhfeld, 2009) of a contingency table whose cells represent the number of times consumers in the sample associate a product (rows) with a certain attribute (columns). The interpretation of the maps is relatively simple: the closer the points in the same set, the more similar their characteristics (they equally contribute to the construction of bi-plot). However, distance cannot be considered itself as a measure of correlation in a quantitative sense (Hoffman Franke, 1986). Instead distance is an indicator of the relative similarity or dissimilarity between points in the bi-plot, where the closer the points the more likely they are to be similar, and vice versa. This interpretation comes from the formal construction of these maps; from this point of view, the distance of each point from the origin needs to be considered from the hypothesis that if points coincided with the origin there would be perfect independence between variables (Beh, 2010), consequently if they are not next to the origin there is a correlation between categories. Graphical interpretation must be accompanied by statistical parameters of goodness of projection of each point in the plane with relation to the two axes (Hoffman and Franke, 1986), as described in Section 4.

4. Results and Discussion

4.1 Descriptive results

Our analysis of the descriptive results focuses on the purchasing habits of respondents, with particular reference to the sale channels used to buy food and the incidence of organic and local products in the family food budget. In Table 6 the sale channels are ranked in order of utilization. Data were collected by selecting consumers that use the three different sale channels (i.e. LRC, SPE and CSA).

The first ranked sale channel is consistent with the targeted group for LRC and CSA consumers, who stated they prefer to buy at the sale channel representing their groups. The interviewees at specialized organic stores stated that they primarily use large retail chains for food purchases; this result is consistent with literature which shows a wide range of organic products in large retail chains (Falguera *et al.*, 2012). The second preferred sale channels also changes on the basis of the group considered: LRC consumers use small shops, SPE consumers prefer specialized stores, and CSA consumers go to large retail chains. Interestingly, those who use organic shops seem to avoid direct-sale and vice versa.

Results on expenditure for organic and local products (see Table 7) show that respondents interviewed at different sale channels have different consumption preferences, which are consistent with the retail chains adopted. LRC customers consume few organic or local products, 96.6% and 90.0% of the sample declared that less than 40% of its food family expenditure was spent of these two types of products, respectively. Considering SPE and CSA consumers, the expenditure for niche products rises significantly, since CSA consumers are more attracted by organic products than organic store customers are attracted by local foods. This suggests that a high level of local food consumption implies a good level of organic food consumption, while some organic consumers are not attracted by local products. As there is no strong evidence in the literature on this issue, more research is recommended.

Table 6. State importance of sales channels by ranking of use

	LRC	SPE	CSA	Total
	<i>Average (rank)</i>	<i>Average (rank)</i>	<i>Average (rank)</i>	<i>Average (rank)</i>
Large Retail Chains	1,13 (1)	1,74 (1)	2,20 (2)	1,69 (1)
Open-air markets	2,95 (3)	3,44 (3)	3,78 (5)	3,39 (3)
Organic Specialized Store	4,42 (5)	2,35 (2)	3,67 (4)	3,48 (5)
Direct Sale	3,59 (4)	3,63 (4)	1,78 (1)	3,00 (2)
Small Retail Shop	2,93 (2)	3,84 (5)	3,58 (3)	3,45 (4)

Note: interviewees ranked the sale channel using the scale: 1 = the first; 2= the second; 3 =the third; 4 = the fourth, and 5 =the fifth sale channel in term of utilization. Average =average of ranking value within the sample; rank = final ranking.

Table 7. Stated share of family food expenditure for organic and local products by sale channel

	LRC	SPE	CSA	Total
	<i>No. (%)</i>	<i>No.(%)</i>	<i>No. (%)</i>	<i>No. (%)</i>
<i>Organic products</i>				
<20%	97 (80.8)	37 (30.8)	36 (30.0)	170 (47.2)
21-40%	19 (15.8)	39 (32.5)	33 (27.5)	91 (25.3)
41-60%	3 (2.5)	10 (8.3)	27 (22.5)	40 (11.1)
61-80%	1 (0.8)	15 (12.5)	14 (11.7)	30 (8.3)
>81%	0 (0.0)	19 (15.8)	10 (8.3)	29 (8.1)
<i>Local products</i>				
<20%	76 (63.3)	61 (50.8)	20 (16.7)	157 (43.6)
21-40%	32 (26.7)	33 (27.5)	35 (29.2)	100 (27.8)
41-60%	3 (2.5)	14 (11.7)	36 (30.0)	53 (14.7)
61-80%	7 (5.9)	7 (5.8)	22 (18.3)	36 (10.0)
>81%	2 (1.7)	5 (4.2)	7 (5.8)	14 (3.9)

4.2 Perceived differences between food categories

The results of the simple correspondence analysis are presented for the whole sample, controlling for gender and sales channel. Figures 1, 2 and 3 show the perceptual maps of national brands, private labels, organic, certified regional speciality and local food, highlighting their positioning in the market with respect to the fifteen attributes considered. The maps should be interpreted together with their tables, checking for statistical indicators of the quality of data extraction, in order to test the reliability of what seems to be suggested by the graphs.

4.2.1. Perceptual map for the whole sample

The data of the whole sample show that consumers differentiate products by associating specific attributes with them. As reported for Figure 1, a significant correspondence was found among the categories considered. The first two dimensions account for 88.1% of the total inertia, saving a quite good satisfactory quota of the raw information. The perceptual map should be interpreted taking Table 8 into account. As explained in Hoffman and Franke (1986), the *mass* is a weight of the number of times each product or attribute has been reciprocally connected by respondents. As the mass indicates the citation of each category and, by design, interviewees could link any attribute to any product, it can be used with caution to reveal the categories (products or attributes) that consumers recognize more easily and vice versa. The *coordinate* columns contain the coordinates of the points on the first and second dimensions, respectively. They are a measure of distance of points from the origin, thus indicating whether points are significantly correlated with each other, as explained in Sect. 3.2.

The *Inertia*, *Contribution to dimension*, *Squared correlation* and *Quality* are the most informative statistics. The Inertia of a point represents its contribution within its set of categories in constructing the map, so the higher the value, the higher the importance of the point in the bi-plot. Contribution to dimension refers to how a category is plotted on each axis, thus it measures the importance of the point for each axis. Finally, Squared correlation and Quality, which represents the summed squared correlations, estimate the reliability of each point in defining the axis and the whole graph, respectively.

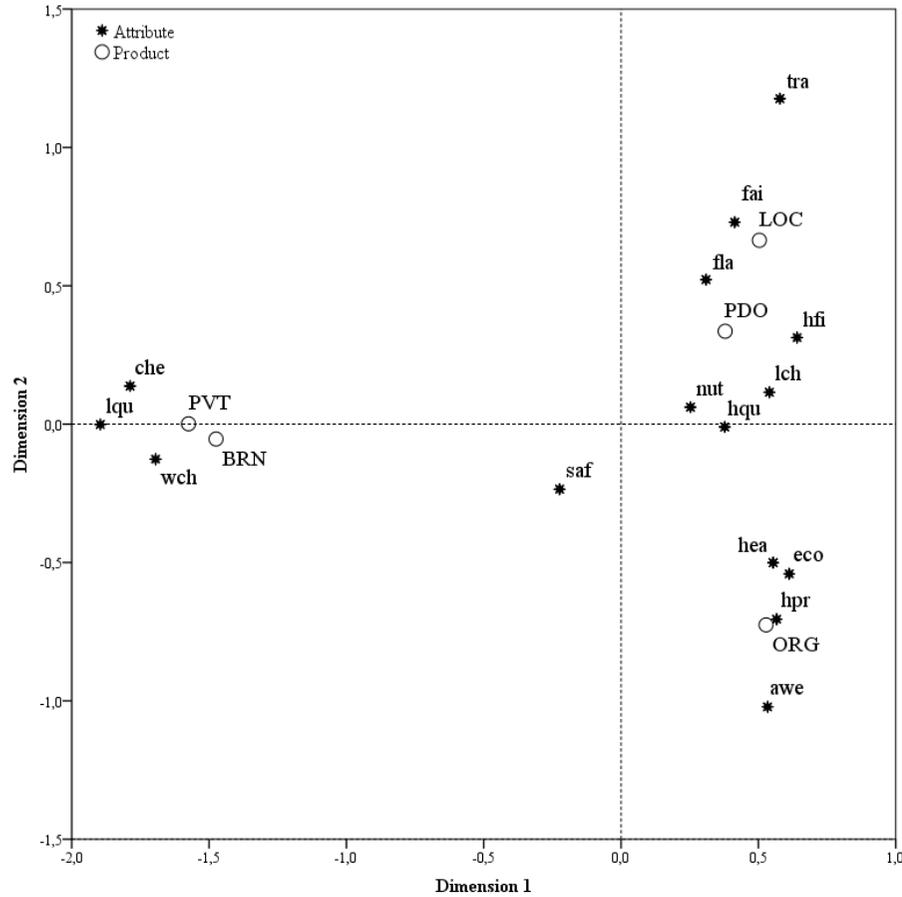
The map in Figure 1 clearly shows that interviewees perceived a strong differentiation between two subsets of products: national brands (BRN) and private labels (PVT) are positioned to the left of the origin, while organic (ORG), certified regional specialities (PDO) and local food (LOC) are located to the right. First of all, consumers differentiate between niche products and well-established food categories, demonstrating that they are characterized by different perceived values. Table 8 highlights that BRN and PVT clearly contribute to the definition of

the first dimension, and ORG and LOC food contribute to the second. On the other hand the PDO point is irrelevant for both dimensions of the perceptual map, so its position in the map is not completely reliable.

Considering the attributes, BRN and PVT are both close to “cheap” (che), “low quality” (lqu) and “wide choice” (wch). Although the statistics and graph would seem to imply that these three cues are more representative for perceiving PVT than BRN, our results suggest that consumers tend to consider both these products as being good value in terms of price and choice. This confirms the optimal market performances of private labels found in the literature (Kumar and Steenkamp, 2007; Ailawadi *et al.*, 2008). On the contrary, the perceived low quality seems to indicate that these categories are badly positioned with respect to other food categories. This contrasts with discussion about retailers changing their strategy in order to increase the quality of private labels (Wellman, 1997; Hoch *et al.*, 2000), and would seem to indicate that national brands are beginning to lose their position as quality leader in the food market. Nonetheless, perceptual maps are constructed on the basis of relative frequencies, in this sense the outcome of data processing is stressed by the non-attribution of these attributes to niche products.

We found that consumers differentiate more between organic, regional specialities and local food. Considering the position of points and numerical indicators, ORGs are clearly attached to “animal welfare” (awe) and “high price” (hpr). Interestingly, we found that “environmental friendly” (eco) and “healthy” (hea) cues, which are also very close to this category and represent its typical traits, are less important. As expected, healthiness and respect for environment were perceived in organic food. In addition, consumers associate these products more than the others with animal welfare and high price. High price could explain why consumers in these times of crisis are buying fewer organic products (Falguera *et al.*, 2009). This perception of increased animal welfare confirms that consumers make a connection between organic products and non-intensive methods of breeding (Harper and Makatouni, 2002); this positive belief could thus be exploited for the introduction organic products with enhanced quality in terms of respect for the livestock.

Figure 1. Perceptual map of product



Note: total inertia = .881 – $\chi^2 = 5,247.14$ – Sign. = .000

Table 8. Statistics of perceptual map in Figure 1

Category	Mass	Coordinate		Inertia	Contribution to dimension		Squared correlation		
		1	2		1	2	1	2	Quality
<i>Products</i>									
BRN	.123	-1.475	-.054	.216	.361	.001	.923	.001	.924
PVT	.118	-1.575	.001	.234	.395	.000	.930	.000	.930
ORG	.317	.528	-.725	.118	.119	.546	.559	.433	.992
PDO	.172	.379	.336	.064	.033	.064	.288	.093	.381
LOC	.269	.503	.665	.100	.092	.389	.504	.361	.866
<i>Attributes</i>									
awe	.057	.533	-1.022	.033	.022	.195	.360	.543	.902
che	.068	-1.787	.138	.176	.290	.004	.910	.002	.912
eco	.068	.612	-.541	.032	.035	.066	.588	.189	.777
fai	.071	.414	.730	.023	.016	.123	.389	.498	.887
fla	.080	.309	.523	.015	.010	.072	.385	.453	.838
hea	.076	.554	-.501	.024	.031	.062	.731	.245	.976
hfi	.034	.641	.313	.017	.019	.011	.619	.061	.679
hpr	.063	.566	-.705	.030	.027	.102	.498	.317	.815
hqu	.089	.377	-.010	.019	.017	.000	.486	.000	.487
lch	.039	.540	.115	.014	.015	.002	.606	.011	.617
lqu	.040	-1.896	-.001	.106	.192	.000	.994	.000	.994
nut	.069	.252	.061	.003	.006	.001	.967	.023	.991
saf	.100	-.224	-.235	.017	.007	.018	.226	.102	.328
tra	.075	.578	1.176	.051	.034	.341	.369	.629	.998
wch	.072	-1.695	-.126	.172	.279	.004	.897	.002	.899

In the first quadrant of the map is local food, which is strongly represented by the two cues “traditional” (tra) and “fair” (fai), while “flavourful” (fla) is less reliable though still close to the category. Our data confirm how local food has been reported in the literature, i.e. in terms of tradition and social-embeddedness (Seyfang, 2006; Santini and Paloma, 2013). This suggests that by consuming local food consumers feel they are supporting the local economy (fai) and its agro-food culture (tra), which has clear implications for marketing strategies for these products.

Certified regional specialities are located close to the LOC point. As discussed, the position of PDO is not completely reliable in our map, but can nevertheless be interpreted with caution. The same reasoning applies to the points of attributes that do not contribute to the creation of the bi-plot, i.e. “hard to find” (hfi), “lack of choice” (lch), “high quality” (hqu), “nourishing” (nut), and “safe” (saf). There is a lack of correspondences between these and other categories considered in the analysis, which may derive from interviewees scarcely using these cues or using them for both PDO and LOC food. The masses in Table 8 suggest that attributes lch, hqu, nut and saf are relevant in term of consumer citations, while hfi was not used by interviewees. PDO seems to share with LOC food the positive attributes of high quality and nutritional properties, but with a poor range of choice. On the other hand, as PDO and LOC products in the market are highly heterogeneous, positive cues and perceived “lack of choice” suggest that pro-active entrepreneurs should undertake differentiation marketing strategies.

The perception of food safety, which is one of the fundamental determinants of consumer choice (Grunert, 2005), offers interesting insights. Given the position of the attribute “safe” (saf), as well as its mass and reliability, it seems to be the most cited by respondents yet the least related to a specific product. This suggests that consumers do not perceive one particular product as being safer (or less safe) than another.

4.2.2. Perceptual map controlling for gender

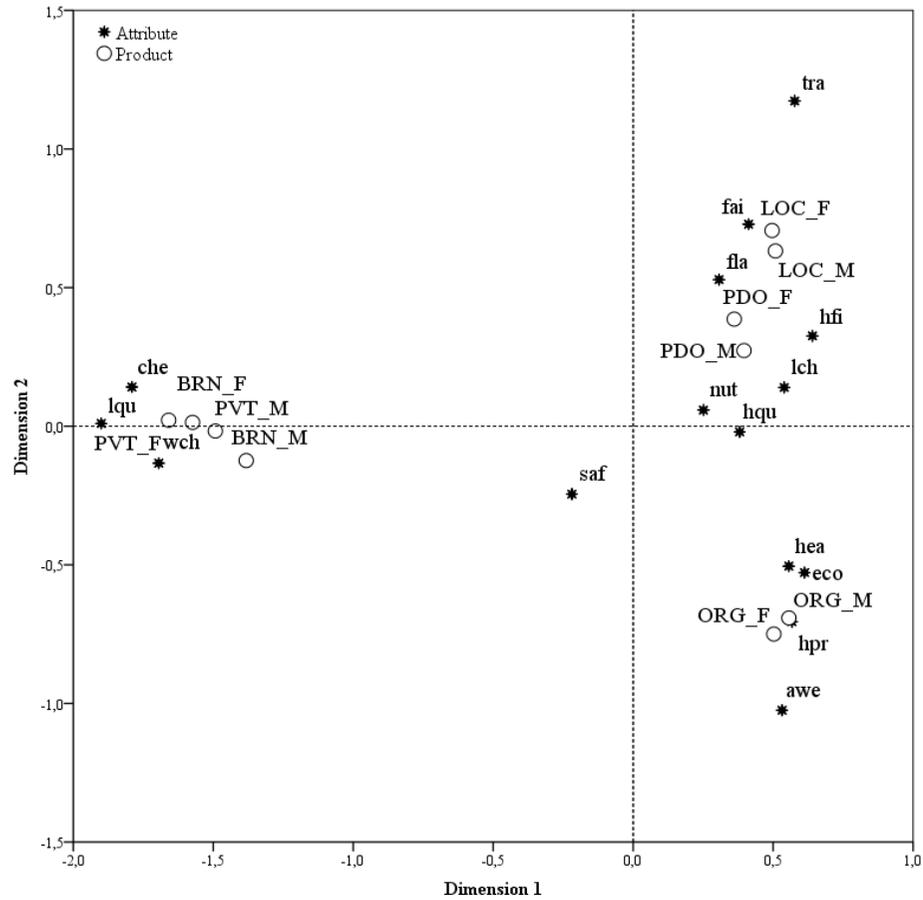
We also controlled for perception between different genders. Again our perceptual map offers a satisfactory representation of a significantly proven correspondence between attributes and products, preserving 87.2% of the inertia with dimensions 1 and 2 (see Figure 2). Looking at the bi-plot and Table 9, distinction by gender does not show any relevant difference from whole sample map, indicating that male (_M) or female (_F) patterns of perception are not influenced by this characteristic.

4.2.3. Perceptual map controlling for sale channels

Figure 3 and Table 10 report the perception of macro-categories of food of the sub-samples interviewed at a large retail chain (_L) and a specialized organic store (_O), and with community supported agriculture participants (_C). The bi-plot saves 82.2% of the primary information and represents significant correspondences between points as in the previous cases. Although Figure 3 almost overlaps with Figures 1 and 2 with reference to the left-hand side of the map, at the right-hand side of the origin, LOC, PDO and ORG (and their linked attributes) are shifted with respect to first dimension. The bi-plot highlights that PDO_C falls close to points representing local products (LOC_C, LOC_O and LOC_C). Even though it has a low quality (see Table 10), this position suggests that consumers of local products perceive food that has a certified denomination of origin as being similar to products that they buy through direct-sale schemes. One explanation may be that CSA participants are attracted by regional/traditional products, so they really see local products as certified regional speciality food. However, there may be a bias in stated perception due to the fact that data were not all collected in the same way. As discussed, local consumers compiled questionnaires online, where products may not be described as effectively as in face-to-face interviews, where the interviewer can answer any doubts. If so, perhaps local consumers considered the regional specialities as local products due to an experimental error and thus the results should be discounted. However, our descriptive results highlight that local consumers also use large retail chains for family food purchase and have a high level of education (see Tables 5 and 6). Consequently, they must be aware of PDO products that are normally sold at supermarkets and are very likely to understand the difference between local products and certified products. We are thus inclined to believe our first interpretation, suggesting that more studies on this issue should be undertaken.

The statistical indicators in Table 10 confirm that relevant correspondences between attributes and products remain the same. Little differences can be found with respect to particular points. This is the case of ORG_C, which represents the perception of organic products expressed by consumers at large retail chains; this point is closer to “animal welfare” (awe), than ORG_S and ORG_C, suggesting that consumers that are less familiar with these products perceive organic methods as being more animal friendly than do local and organic consumers. This seems to indicate that the more familiar consumers are with niche products the more they are able to identify their “real” characteristics. In fact, increased animal welfare is not part of organic production due to certification guidelines.

Figure 2. Perceptual map of product by gender

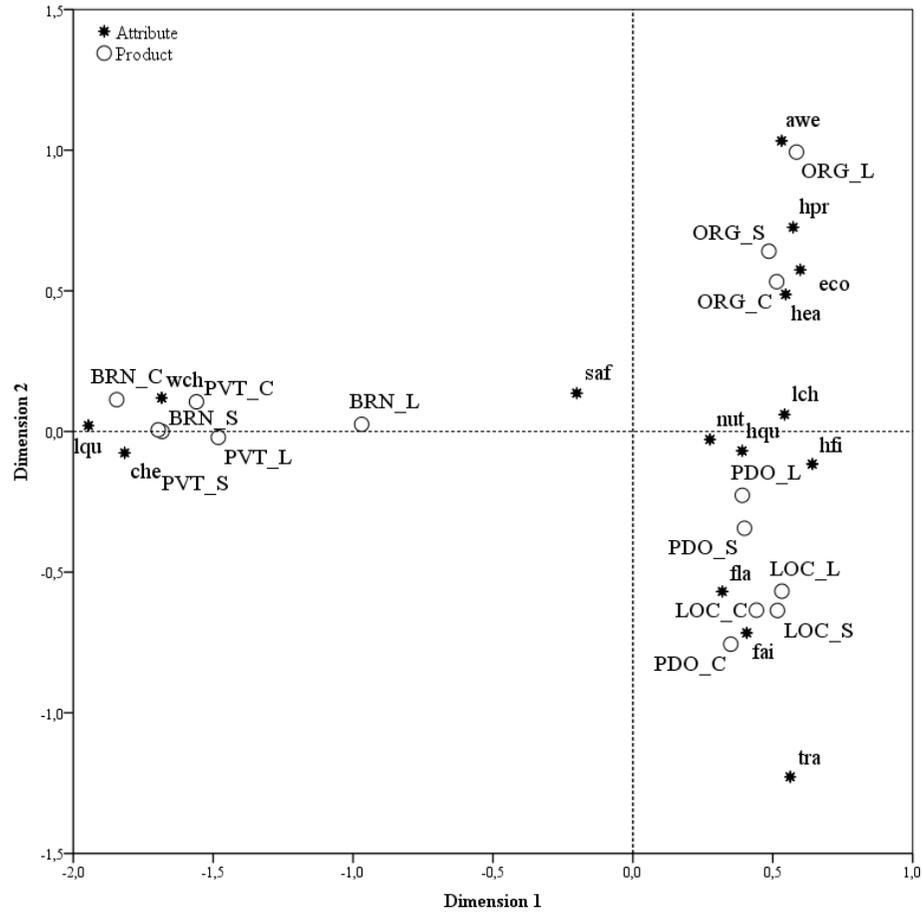


Note: total inertia = $.872 - \chi^2 = 5,319.02$ – Sign. = .000

Table 9. Statistics of perceptual map in Figure 2

Category	Mass	Coordinate		Inertia	Contribution to dimension		Squared correlation		
		1	2		1	2	1	2	Quality
<i>Products</i>									
BRN_F	.058	-1.574	.014	.116	.195	.000	.928	.000	.928
BRN_M	.065	-1.382	-.124	.103	.167	.003	.899	.003	.902
PVT_F	.058	-1.66	.022	.129	.214	.000	.92	.000	.92
PVT_M	.061	-1.493	-.017	.107	.181	.000	.935	.000	.935
ORG_F	.167	.502	-.750	.061	.056	.306	.510	.468	.977
ORG_M	.151	.556	-.692	.059	.063	.235	.586	.373	.959
PDO_F	.081	.361	.386	.033	.014	.040	.236	.111	.347
PDO_M	.091	.396	.273	.032	.019	.022	.336	.066	.402
LOC_F	.133	.496	.706	.053	.044	.216	.462	.385	.848
LOC_M	.136	.508	.632	.049	.047	.177	.531	.339	.87
<i>Attributes</i>									
awe	.057	.532	-1.025	.034	.022	.195	.350	.535	.885
che	.068	-1.791	.141	.177	.291	.004	.908	.002	.911
eco	.068	.612	-.528	.033	.034	.062	.584	.179	.763
fai	.071	.412	.729	.023	.016	.123	.384	.495	.879
fla	.080	.307	-.529	.015	.010	.073	.367	.449	.815
hea	.076	.556	-.505	.024	.031	.063	.718	.244	.962
hfi	.034	.640	.326	.017	.019	.012	.612	.065	.677
hpr	.063	.567	-.705	.031	.027	.102	.489	.311	.800
hqu	.089	.380	-.021	.020	.017	.000	.483	.001	.484
lch	.039	.539	.140	.015	.015	.002	.55	.015	.566
lqu	.040	-1.900	.010	.108	.192	.000	.987	.000	.987
nut	.069	.251	.058	.004	.006	.001	.824	.018	.843
saf	.100	-.219	-.245	.018	.006	.020	.202	.104	.305
tra	.075	.577	1.173	.051	.034	.339	.367	.625	.992
wch	.072	-1.695	-.133	.172	.279	.004	.896	.002	.899

Figure 3. Perceptual map of product by sale channels



Note: total inertia = .822 - $\chi^2 = 5,805.91$ - Sign. = .000

Table 10. Statistics of perceptual map in Figure 3

Category	Mass	Coordinate		Inertia	Contribution to dimension		Squared correlation		
		1	2		1	2	1	2	Quality
<i>Products</i>									
BRN_L	.047	-.969	.026	.053	.058	.000	.627	.000	.627
BRN_S	.041	-1.682	.000	.097	.154	.000	.903	.000	.903
BRN_C	.036	-1.845	.113	.096	.161	.001	.958	.002	.960
PVT_L	.046	-1.481	-.021	.086	.135	.000	.885	.000	.885
PVT_S	.034	-1.696	.006	.081	.131	.000	.918	.000	.918
PVT_C	.038	-1.560	.106	.076	.122	.001	.911	.002	.913
ORG_L	.098	.585	.993	.064	.045	.308	.397	.478	.875
ORG_S	.123	.486	.641	.040	.039	.161	.550	.400	.950
ORG_C	.096	.514	.532	.035	.034	.086	.539	.242	.781
PDO_L	.069	.391	-.227	.023	.014	.011	.348	.049	.397
PDO_S	.054	.399	-.344	.018	.011	.020	.365	.113	.478
PDO_C	.049	.350	-.756	.032	.008	.088	.140	.274	.414
LOC_L	.092	.532	-.568	.037	.035	.094	.533	.253	.786
LOC_S	.082	.517	-.636	.039	.029	.106	.419	.265	.684
LOC_C	.095	.442	-.635	.034	.025	.122	.410	.354	.764
<i>Attributes</i>									
awe	.057	.531	1.033	.034	.021	.193	.352	.556	.908
che	.068	-1.816	-.076	.184	.296	.001	.910	.001	.910
eco	.068	.598	.575	.034	.033	.072	.550	.212	.762
fai	.071	.407	-.716	.026	.016	.115	.342	.442	.784
fla	.080	.319	-.569	.018	.011	.083	.341	.451	.792
hea	.076	.546	.487	.025	.030	.057	.677	.225	.902
hfi	.034	.641	-.116	.024	.018	.001	.426	.006	.431
hpr	.063	.573	.726	.035	.027	.105	.445	.298	.743
hqu	.089	.390	-.069	.021	.018	.001	.476	.006	.483
lch	.039	.542	.060	.022	.015	.000	.393	.002	.395
lqu	.040	-1.946	.021	.124	.199	.000	.914	.000	.914
nut	.069	.275	-.028	.009	.007	.000	.431	.002	.433
saf	.100	-0.201	.136	.023	.005	.006	.131	.025	.156
tra	.075	.562	-1.228	.055	.032	.361	.323	.643	.967
wch	.072	-1.684	.119	.175	.272	.003	.883	.002	.885

5. Conclusions

In developed countries, food not only satisfies hunger, but also several secondary needs; consumers do not just consume foodstuffs, but choose particular products to fulfill emotional needs (Jaeger, 2006). Given economic and environmental constraints, consumers behave in order to maximize their utility, which derives from preferences due to attitudes, beliefs and, obviously, the perception of the attributes of a product. Analyzing the determinants of consumption patterns has important implications in both the private and public sectors. Manufacturers take advantage of this information in their marketing plans, while governments can use this information in educational campaigns to support or discourage particular eating habits.

This paper contributes to the international literature by discussing the perception of different macro-categories of food, namely: national brands, private labels, organic products, certified regional specialities and local food. In fact, despite the number of contributions devoted to differentiation issues, we are not aware of any study that compares traditional and niche products.

Similarities and dissimilarities between these food categories were studied using simple correspondence analysis. Data were collected from a stratified sample on the basis of age, gender and purchasing habits. A total of 360 questionnaires were collected through face-to-face interviews at large retail chains and specialized organic stores, along with online interviews for consumers using direct-sale schemes. Simple correspondence analysis allowed us to create perceptual maps that represent relations between products and the attributes that consumers attach to them by interpreting the position of points in a Cartesian plane and some numerical indicators.

Results show that consumers are able to distinguish niche products from other types of productions. Within traditional food, i.e. national and store brands, respondents do not seem to perceive significant differences, confirming the value of private labels and the optimal strategies adopted in the last few years by retailers (Hoch *et al.*, 2000; Akbay and Jones, 2005). Differentiation still works within niche products, in fact organic and local food are clearly separated. On the other hand, regional specialities can be somewhat doubtfully interpreted as similar to local food.

We believe that these results extend Lockie's reasoning, 2009 on the "risk" of globalization of social-niche innovation in the food sector. Citing the case of organic products, Lockie noted that they were introduced into large-scale production some years after the explosion of demand

for environmentally-friendly food, which was initially satisfied by small producers. Lockie pointed out that local food is likely to follow the same route. Searching for effective leverages of differentiation, producers will start to offer “local” products, however, as local food’s added-value is the social-embeddedness of supporting local small communities, the risk of distortion of a concept and unfair competition is high. This topic seems to be very attractive for future research. Although the scaling of local production could be argued to generate problems, there are some good examples of food differentiation by using the local cue in Italy (where our survey was conducted) such as the retail chain Eataly, which globalized the idea of the Slow Food Movement. The most challenging issue is to quantify the value(s) and disvalue(s) that this world famous store can bring to short food supply chains.

Our findings on PDO products suggest that a certification of origin is useful for distinguishing high-quality traditional production from national and store branded products, thus helping smaller producers to protect their value. Organic and local products seem to enjoy a prominent position in term of consumer perception. We confirmed that organic products are considered environmentally-friendly and healthy and, importantly, connected to animal welfare, a belief that indicates a possible leverage to work on in order to revitalize the organic food market. Local food is traditional, fair and flavorful. These three cues could all be used to promote products that satisfy hedonistic needs.

Our survey revealed that well-established national brands and private labels are considered as being good value and possessing wide choice and low quality. The first two attributes explain why they still (and will in future) represent the vast majority of the food purchased by the average consumers, while “low quality” is not likely to count that much for these products, because it was not used for the other foods, which guarantee more quality at high prices.

5.1. Limitations and recommendations for further studies

With regard to our experimental design and sample characteristics, we are aware that face-to-face interviews differ from online questionnaires and that our sample does not respect population pattern in Italy in terms of education level. Nonetheless, we believe that the vast majority of our interviewees were certainly able to understand the topic as well as the attributes proposed. One solution would be to collect more questionnaires in order to reach a reasonable number of people with a lower standard of education, and use farmer markets to gather face-to-face interviews. However even these recommendations present some limits in terms of economic needs, ability to control *ex-ante* the demographic descriptors of the sample, and the representation of real local food consumers, as consumers at farmers market could be just

occasional direct sale supporters, whereas CSA participants are certainly close to short food supply networks.

Regarding our methodology, simple correspondence analysis gives good representations and is reasonably easy to interpret, but does not return real quantitative results. As discussed in the paper, the distance in bi-plots derives from products/attributes links established by consumers, so even if they are quantified, they are expressed in the scale created by the specific contingent table they come from, so they cannot be compared directly with similar quantitative studies. In this particular case, a very good compromise is to consider all the statistical output discussed in the paper and be cautious with strict interpretations. Nevertheless, we believe that we have confirmed that perceptual maps are a useful tool for consumer analysis.

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