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The Clients of Specialized Organic Retailers in Italy

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Authors' contributions

This work was carried out in close collaboration, Author FMS designed the study, supervised the survey, and wrote the first draft of the manuscript. Author FD cooperated in the literature search and carried out the statistical analysis. The conclusions were written together.

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ABSTRACT

Aims: The organic share of the Italian food market is still small, probably below 2%, but is growing steadily, with a progressive expansion of different typologies of points of sale. The Italian consumers of organic products have been studied by many authors, from different points of view and with different methodologies, but this specific segment – the clients of specialised and certified organic retailers, had never been investigated in detail.
Study Design: Questionnaire for clients developed in collaboration with experts and focus group participants; random selection of geographically representative certified points of sale; validation of results with other focus groups.
Place and Duration of Study: Italy, between March and September 2010.
Methodology: In a representative sample of 46 certified points of sale scattered all over Italy, a total of 845 valid questionnaires containing 23 questions have been filled by the clients. Their demographic data and several other variables have been used with a clustering procedure.
Results: Six different groups have been formed: The "indifferent consumers" with 9% of respondents, the "increased" with 16.9%, the "regular unhappy" with 32.1%, the "occasional" with 4.4%, the "occasional not informed" with 6% and the "convinced and frequent" with 31.6% of the respondents.
Conclusion: Also the clients of this type of retailers, who are supposedly more informed and

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motivated than in other points of sale, are not an homogeneous group and they show a widespread belief that prices are too high; still there is a lack of information about the public goods generated by organic agriculture. More and better information should be consequently supplied to consumers, to avoid their search for cheaper organic products, in other categories of points of sale.

Keywords: Organic food; cluster analysis; information; marketing.

1. INTRODUCTION

The official figures about the Italian food market indicate that the Italian families' total expenditure for "food" (tobacco included) in 2011 was about 166 billions euros; without tobacco and alcoholic beverages, this figure decreases to 139 billions [1]. The Italians' expenditure for eating "out of home" was estimated to be about 73 billion in 2010 and probably it has remained at the same level [2]. In the decade 2000-2010, the total food consumption, in quantity, has decreased at an average annual rate of 0.3%, while contemporaneously the average annual price increase has been calculated at 2.4% [2].

In other words, the food market is totally saturated, and – low inflation aside – it is shifting towards more expensive products (very processed foods, ready to eat foods, special foods, and organic foods).

Within this complex scenario, the about 61 million people who live in Italy (7% with foreign passport) keep expanding their consumption of organic food, which has reached the value of three billion euro [3]. Compared with the aggregated figure of 212 billions, obtained by summing together the food consumption at home plus the expenditure out of home, it gives a share of about 1.4%, which coincides with the opinions of many organic market experts. In relative terms, it is an extremely small amount, but it is growing and this makes organic agriculture and food interesting for all the shareholders in the chain value.

Some aggregated data about sales and customers of the supermarket chains [3] confirm that, at least in this prominent marketing channel, the sales of organic foods have increased in 2012 by 7.3%, after +9% in 2011 and +11.7 in 2010. About three fourths of the family expenditure is concentrated in four categories: fresh and processed fruits and veggies, milk and dairy products, eggs, and biscuits + snacks + cakes.

The first organic shop (Il Girasole – the Sunflower - a cooperative society) was open in 1974 in Milan, in the heart of the industrialized and advanced Northern Italy, the financial capital of the country, by a group of farmers, consumers and medical doctors who shared the worries for the industrialization of farming and the desire for healthy and nutritious food. Since that year, the expansion has been slow for about two decades, but after 1991, when the European Union finally regulated the sector, all value chain shareholders have boomed: production, processing, trade (import – export) and retail. Consumers can nowadays find organic products through a variety of marketing channels (Table 1): on farm shops, on farm organic restaurants, specialised periodical organic farmers' markets, organic restaurants in town, specialised organic shops, Solidarity Groups of Purchase, while over one million kids daily have some organic ingredients at their canteens at schools. Also hospitals and other types of communities are introducing organic ingredients into their procurement.

Table 1. Marketing channels for organic products (no.)

Marketing channels	2000	2005	2011
On farm point of sale	na	1,199	2,535
Organic farmers' market	119	185	213
Solidarity purchase group	40	222	861
Canteen at school	199	647	1116
Organic agri-tourism	591	804	1349
Organic restaurant	136	176	267
Organic retailer	986	1,014	1,212

Some organic products, from fresh products like salads and fruits, to wines, cheeses, meats, etc. are very frequent in many conventional restaurants, while organic imported tropical products (teas, juices, cane sugar, coffee, and chocolate) are available in many coffee bars. Another marketing channel is represented by the almost 18,000 pharmacies and thousands of beauty shops and healthy food shops, where organic baby foods, pasta, biscuits, teas, dried fruits, juices, sauces, jams, etc. are proposed side by side with their conventional competitors or in dedicated corners [4].

The real expansion has however taken place since 1995, when the first supermarket chain, the Italian ESSELUNGA, operating however only in Northern Italy, after years of observation, careful planning and preparation, stepped into the organic sector, with hundreds of items and its own private label, accompanied by an aggressive communication campaign. This move almost obliged all other large retailers, both Italians (COOP, CONAD, TODIS, etc..) or Italian branches of foreign companies (LIDL, Carrefour, Auchan - just to mention a few) to enter into this growing market, either by distributing products labelled by the farmers or the processors, and by distributing produces under their own private label. In 2005, the share of supermarkets in the families' purchase was estimated at about 39%, at the same level as in France or Netherlands, but much less than in Denmark, United Kingdom and Switzerland, where the share was up to 80% and more. More recently, some figures let supposing that the supermarkets' share is only one fifth of the total market, due to the expansion of all other forms of distribution and to the relevance of public procurement.

A relatively recent new entry into the distribution of organic foods and other items is represented by the CuoreBio (Bio Heart) project proposed by ECOR NaturaSì (NatureYes) to presently 250 independent retailers, who can benefit from a common purchase platform, a large assortment at good prices, promotion and information activities, as already happening in France, Switzerland or Germany. ECOR NaturaSi since 1992 also proposes a franchising approach that has been adopted by 83 franchisees in 14 Regions, with 11 points of sale in Rome and eight in Milan. In these organic supermarkets, clients find over 4,000 references, including grocery, stationary, and products for personal hygiene and for the house. NaturaSi also publishes a quarterly magazine, printed in thousands of copies, distributed freely at the pints of sale, and manages a fidelity card with about 70,000 holders

Why do Italian consumers increasingly buy organic foods? First of all, it must be remembered that Italians, like the people living in other European countries, have been scared by the long list of food scandals of the last two decades and they fear the residues of pesticides, insecticides and hormones, chemical additives and artificial colours, dioxin, mercury, GMOs, etc. [5]; there is a growing number of people manifesting all sorts of allergies and celiac disease (allergy to gluten – the protein contained in the hard wheat used to make pasta) is rising. Most Italians share the belief that "a healthy diet is the better medicine" to have a long and healthy life [6].

Since the late '80s, several studies have been conducted all over the country [7-28 - just to mention the papers published in English], some with a very local approach, some other ones with a national coverage. Some authors were interested in all organic foods, whereas other ones have focused only one product (from tomato to trout). Other studies have investigated the motivations and behaviours of consumers in several EU countries, and this allows some interesting comparisons [29-31]. A more recent study [32] has even investigated in Palermo, the main town of Sicily, the motivations of the non consumers, to find the reasons of their behaviour and to design marketing policies to have them changing their attitudes.

When the results of the above mentioned studies are compared, a qualitative synthesis may be elaborated and we find that organic buyers / consumers are relatively young, with a medium – high socio-economic level, with good education, relatively informed about food and nutrition, environment, but with a critical attitude about the premium prices, which is expected to decrease. Italians buy and consume organic foods mostly for private benefits, because these foods are supposed to be healthier, safer (no chemical residues, no hormones, no GMOs), richer in nutrients (more vitamins, more dry matter, better proteins) than the conventional foods.

As a matter of fact, Italians are not very concerned by environment, climate change, and almost totally neglect the issue of animal welfare. Their motivations are mostly selfish: what really drives the purchasers is their own health and that of their families. Other motivations, such as the protection of nature, the safeguard of endangered species and the solidarity with farmers appear to be guiding only a minority of clients. Organic foods are purchased through a variety of points of sale, and the main problem – especially in the southern regions, is the scarce availability that often blocks potential consumers. In order to save money and to show some attention to the economic/social problems affecting the countryside, some organic consumers prefer the zero miles approach, and buy most of their food through "solidarity groups" who link directly with local producers, or at the periodic organic farmers' open markets, where they can interact with the producers, share their problems and communicate their feelings.

2. MATERIALS AND METHODS

This research has focused on the purchasing behaviour of the clients of the fully certified organic shops and has taken place between March and September 2010. Supposedly, these persons represent the most informed segment within the organic consumers and they should show the highest level of knowledge and the most articulated motivations.

Out of the universe of 280 fully certified specialised organic retailers, scattered in 15 Italian regions, a sample of 50 points of sale has been randomly extracted, and to each shop owner / manager 20 questionnaires have been given, to be filled by an equal number of respondents (Table 2).

Table 2. Distribution of sampled organic shops

Nielsen area	Points of sale		Sample	
	no.	%	no.	%
North West	72	25.7	12	26.1
North East	136	48.6	22	47.8
Center and Sardinia	49	17.5	8	17.4
South and Sicily	23	8.2	4	8.7
Italy	280	100.0	46	100.0

The questionnaire has been elaborated during April 2010, in a close collaboration between the Authors of this article, a market researcher at the Mediterranean Agronomic Institute of Bari (Italy), and an organic marketing consultant, extremely knowledgeable about the situation and market trends. The first draft of the questionnaire was discussed with some shop managers and during a focus group [33,34] with some consumers, to get their feedback and to introduce the necessary modifications. The definitive version of the questionnaire contained 23 questions, out of which 21 were categorical and two were quantitative (age and number of family members).

The 50 participant shop managers / owners were invited to have ten questionnaires filled by customers during the morning time, and the other ten during the afternoon, to intercept different categories of clients. By October 2010, 46 shop managers/owners had sent back 907 questionnaires, while four managers/owners only at the end of this period have communicated that they could not meet the deadline, because of several problems. Due to this late information, it was not possible to replace these four points of sale.

Out of the 907 received questionnaires, 845 have been retained and transferred into a database. A simple initial elaboration has originated a progress report, that was debated during a national workshop in Rome in December 2010. Later on, an econometric approach has been applied [35], to design a classification tree [36] based on ten variables. This method has allowed individuating four groups: a) Strong consumers with frequent purchase (80.6%); b) low consumers who think that the prices are acceptable (5.9%); low consumers who find that the prices are high and have consequently decreased their purchases (8.0%); low consumers who find that the prices are high, but have however increased their purchases (5.4%).

In our case, the goal of the elaboration has been to cluster the respondents to investigate the following research questions:

a) Is it possible to divide the consumers of organic produces into subgroups with homogeneous purchasing behaviours?
b) What are the determinants of these behaviours?

To cluster the respondents, the following variables have been considered:

- Self evaluation of the respondent: occasional or regular consumer;
- Modification of the organic food consumption in 2009 compared to 2008: decreased, remained the same, increased;
- Frequency of purchase: at least once per week, less than once per week;
- Organic share of the family consumption: little, much, almost all;
- Opinion about present price of organic produces: Low and acceptable, expensive and very expensive;
- Opinion about present price compared to some time ago: Cheaper, same price, more expensive;
- Knowledge: The certification system exists, does not exist, exists only for some produces, I do not know;
- Age: this continuous variable has been recoded into five classes: <36, 36-45, 46-55, 56-65, >65;

- Education: primary and secondary, high school, university degree;
- Nielsen Area: North-east Italy, North-west, Centre and Sardinia, South and Sicily.

Before proceeding with the cluster analysis, it has been necessary to solve the issue of some missing values (Table 3); the amount of missing data is rather low compared to the sample size and even, for one variable, there are no missing values at all. Different solutions exist in literature to address this issue [37-41]. The “determinist hot-deck imputation method” has been used in our case, in which each missing value is replaced with an observed value from a “similar” unit, called the donor [42]. The donors are taken from the sample, as this characterizes the hot-deck procedure. For each recipient, the donor is the “nearest neighbor”, according to some metric. The method is called *deterministic*, since there is no randomness involved in the selection of the donors. Thanks to this technique, it was possible to reconstruct missing information without requiring any a priori assumption about the shape of the data distribution, based only on the knowledge of the empirical distribution of the observed data.

Once the problem of missing values has been solved by using the method described above, the clustering procedure has been implemented, to derive, from the totality of the respondents, a systematic classification. The hierarchical process consists of the following steps: a) Choice of the units of observation: Each validated questionnaire was tested; b) Choice of variables and homogenization of the scale of measurement; d) Choice of metric or similarity between the data; e) Selection of the number of characteristic groups; f) Choice of the classification; g) Interpretation of results.

3. RESULTS AND DISCUSSION

In this initial section we present also data from the questionnaires not shown in tables. Most clients of sampled shops are women, who represent 77% of the respondents. The female share increases to 80% in the North-west and decreases to 63% in the area South and Sicily. Distribution by age groups shows few clients under 35 years and also a few over 65. The most represented age group (36%) is between 36 and 45, followed by the 46-55 years (26.9%). There is no significant difference between men and women in terms of age. The educational level is high: 33% have a university degree, 53% a high school degree. Customers show the lowest educational level in the two northern areas. This finding confirms that in the South, with incomes relatively lower than in the North, organic consumption is still practiced by relatively small elites of conscious consumers, while in the richer North this habit is becoming more frequent also among people with lower formal educational level. Respondents’ distribution by family size is relatively homogeneous, since 27% have three members, 23% have two, and 24% have four. Singles represent 8% of respondents, whereas only 17.5% of the families have more than four components.

Almost 86% of respondents define themselves as regular consumers of organic produces, whereas only 14% affirm to be occasional consumers. This distribution is almost the same in all four Nielsen areas. Over the half of respondents have started buying organic products before 2008, 24.3% have started in 2008 and only 11.7 declare to have begun eating organic food quite recently: for this question, 37.4% of customers do not mark any of the three possible answers. Despite the economic crisis, as indicated by the ISMEA surveys, most people affirm that the family consumption of organic products has increased and for 43.5% it has remained the same. Only a tiny minority says that they have reduced this component of the family budget. Organic produces represent “almost the totality” of food for 31% of respondents, “a big share” for about the half and for only 19% the organic share can be considered marginal. The hard consumers of organic food are found in the North east and in the Centre and Sardinia, whereas the lowest presence is in the South and Sicily.

As written in the Introduction, health is the main driver that motivates the respondents, with 83% as Italian average, that rises to 90% in the South and Sicily; environmental motivations are indicated as a priority by 21% of the clients, while the social purposes, like “to sustain the farmers” are cited by only 3.3% and the ethical-religious-philosophical motivations are mentioned by a tiny 2.2%. The people involved in this research confirm the findings of previous surveys: Italian consumers are moved by substantially selfish goals, of private nature: their own health and that of their family members, whereas public goods such as the environmental protection or the survival of peasantry lag far behind.

There is still an information gap to fill, because only 77% of respondents declare to be knowledgeable about the existence of the certification system, while the balance marks wrong answers, such "there is no certification" and "certification exists only for a few produces". This lack of proper information is stronger in the South and Sicily, where organic foods have arrived only in recent years, but still affects one fifth of the consumers in both northern areas. The absence of motivations different from health and the ignorance about the certification systems confirm the need for more educational campaigns aimed at the consumers, to inform them not only about the links between nutrition and health, but also about the links between healthy foods and preservation of biodiversity, reduction of pollution, social aspects, survival of rural areas, cultural heritage, etc.

Coming to the cluster analysis of the respondents, and taking into account the magnitude of the number of respondents, the not hierarchical method of K means has been applied. Table 4 shows the summary of the analysis describing the elements of each cluster.

The mean clusters are then summarized into six groups representing six different categories of organic consumers:

Cluster 1: The first group includes only 9% of respondents and is represented by a slight preponderance of regular consumers (54%), who affirm that in the last year their consumption of organic products has increased significantly; they buy not more than once per week organic produces; within this group there is a substantial equality between those who consider the prices of organic products as acceptable (51%) and those who consider them too high (49%); regarding recent price evolution, about half of the group concludes that prices have not changed from year to year (55%), whereas the other half believe they are even cheaper (43%), with only a small slice arguing instead that the price has increased (2%); within this group there are consumers relatively well informed on certification schemes (78%), preponderantly of medium age (35-55 years) with a good education and mostly from the North of Italy; we can call this group **INDIFFERENT** consumers.

Cluster 2: in the second group, that contains 16.9% of respondents, all consumers are almost regular buyers (96%) who also have significantly expanded their consumption of organic products over the previous year and who buy on average once a week; they have a very high organic share of their consumption but believe that the prices are very high and even increased; the respondents belonging to this group know the certification system, have attended higher education and for the most part live in Center and in the South of Italy; we call them **INCREASED** consumers.

Table 3. Identification of missing values in dataset

Variable	Statistic units identification	Number of missing values	% of total sample
Self evaluation	189; 270; 365	3	0.4
Modification of consumption	4;75; 102; 115; 248; 337; 385;404; 828	9	1.1
Frequency of purchase	244	1	0.1
Share of organic food	233; 286	2	0.2
Opinion about present prices	127; 214; 731	3	0.4
Opinion about evolution of prices	2; 3; 6; 75; 115; 118; 214; 277; 294; 379; 380; 385; 409; 656; 675; 700; 731; 821	18	2.1
Knowledge of certifications	137; 158; 189; 214; 274; 303; 774	7	0.8
Age	1; 10; 16;31; 43;124; 206; 340; 378; 456; 608; 630; 748; 768; 823	15	1.8
Education	10; 43; 260	3	0.4
Nielsen area	none	0	0.0
Total missing data		61	0.7

Table 4. Clusters

no.	Nickname	no.	%
1	Indifferent	76	9.0
2	Increased	143	16.9
3	Regular unhappy	271	32.1
4	Occasional	37	4.4
5	Occasional not informed	51	6.0
6	Convinced and frequent	267	31.6
Total		845	100.0

Cluster 3: In this third numerous group (32.1%) of respondents, there are more regular consumers, who basically have not modified their consumption of organic products; they buy once a week and their organic share of food expenditure is quite high (58%); this group believes that the prices of organic products are quite expensive and also higher if compared to previous years; they know the certification system, are middle-aged but with a good percentage of people over 55 years (36%), most have a high level of education and reside in the Northwest; we name **REGULAR UNHAPPY** consumers.

Cluster 4: this group includes only 4.4% of respondents, who are mostly occasional consumers and have not modified their consumption of organic products; they buy about once a week and the share of organic products is very small; they believe that organic products are still expensive and that the prices have not changed over the years; these consumers are not very familiar with the certification system, have an age between 35 and 55 years and their education is medium; they live mainly in the Center and in the South of the country; we define them **OCCASIONAL** consumers.

Cluster 5: this group too is very small, with only 6% of respondents, occasional consumers of organic products who have maintained constant their consumption; they have a very low frequency of purchase and in general consume very few organic products; furthermore they consider that the prices are very expensive and even increased over the previous year; very few know the certification system; their age is on average, with a slice of very young consumers; the educational qualifications are medium-high, but there is a good portion of respondents who do not go beyond secondary school; the main area of residence for this group is the North; we name this group **OCCASIONAL NOT INFORMED** consumers.

Cluster 6: the members of this large group (31.6% of respondents) are very regular consumers who increased their organic consumption over the previous year and currently buy at least once a week; they have a large share of organic products in their basket of food, although they declare that the prices are slightly expensive, but in line with the previous year; this group is very familiar with the certification systems, has an average age and good educational qualifications; these respondents mainly live in the North-western regions of Italy; we can call them **CONVINCED AND FREQUENT** consumers.

From ANOVA (Table 5), it can be seen that all variables are significantly associated with the six clusters.

Table 5. Distance between centres of final clusters

Cluster	1	2	3	4	5	6
1		3.02	2.71	1.94	1.37	2.41
2	3.02		1.84	2.49	3.26	1.69
3	2.71	1.84		3.11	2.64	1.20
4	1.94	2.49	3.11		2.03	3.05
5	1.37	3.26	2.64	2.03		2.82
6	2.41	1.69	1.20	3.05	2.82	

Considering the distances (Table 6) between the centers of the six final clusters, it can be seen that they could be reconstituted into two main groups: the first group could include occasional organic consumers (clusters 1, 4 and 5) and the second one the more regular consumer (2, 3 and 6). This latter macro group absorbs 80.6% of respondents, who consider themselves regular and strong consumers, purchase constantly and often organic products, are relatively well informed and conscious about prices.

As a matter of fact, the groups belonging to the two macro categories have close distance between them and show instead more relevant distances with the other groups.

Finally, it can be seen in Fig. 1 that the number of outliers in the clusters is extremely limited and this observation adds meaningfulness to the quality of the clusters.

Table 6. ANOVA analysis

Variable	Cluster		Error		F	Sig
	Mean square	df	Mean square	df		
Self evaluation	6.554	5	.083	839	79.159	.000
Modification of consumption	9.464	5	.248	839	38.196	.000
Frequency of purchase	3.194	5	.168	839	19.027	.000
Share of organic food	150.470	5	.191	839	786.581	.000
Opinion about present prices	29.445	5	.301	839	97.824	.000
Opinion about evolution of prices	2.251	5	.212	839	10.615	.000
Knowledge of certifications	.745	5	.172	839	4.319	.001
Age	4.449	5	.331	839	13.424	.000
Education	8.394	5	.386	839	21.734	.000
Nielsen area	78.971	5	.239	839	330.923	.000

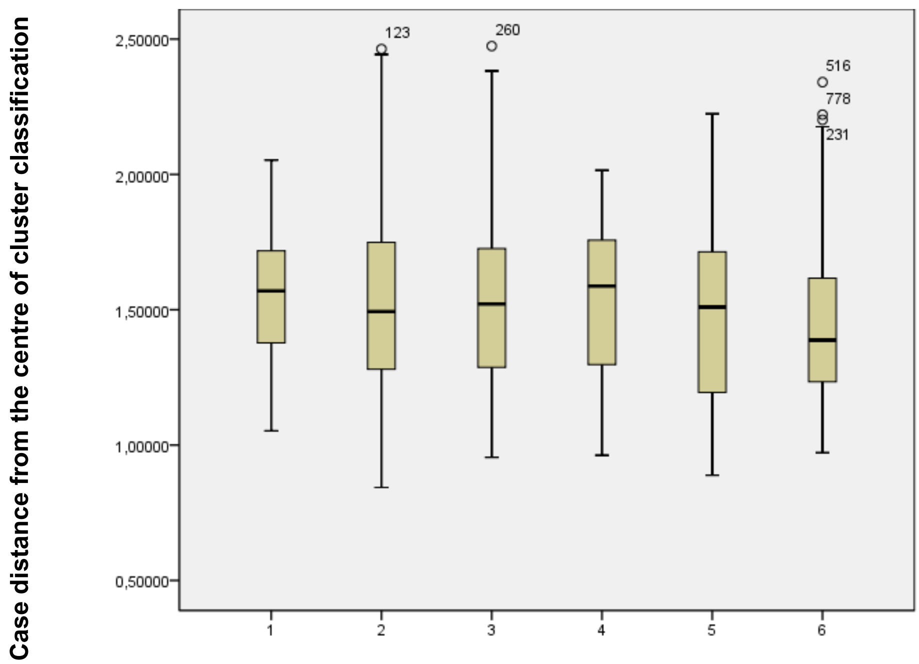

Fig. 1. Outliers identification

4. CONCLUSION

The Italian organic consumers who have participated in this study reveal social characteristics, motivations and knowledge quite similar in the four Nielsen areas and analogous to what has been found in similar studies mentioned in the Introduction.

Thanks to this study, it is possible to affirm that in Italy there is not a “Southern consumer” very different from the “Northern consumer”. Some light differences may arise about prices’ perceptions, but in all econometric analysis the geographical variable “Nielsen Area” is not explanatory.

This research demonstrates that also the most convinced and frequent clients of specialized and certified organic shops, where everything is organic and much more information about products is available, still find that prices are relatively high, do not have a complete knowledge about the certification system, and they are not fully aware about the linkages between organic agriculture and culture, landscape and biodiversity, and survival of family farms.

Taking into account what other Italian researchers have found about the willingness to pay [9,10,12,13,15,18,19,25,28], information “pays back” and should be improved.

Most respondents, even those who are regular and frequent consumers, affirm that prices are high and even increasing over the time. This belief should be contrasted, or at least the premium price should be better justified, because this belief could lead these consumers to search for organic foods from other suppliers, like the conventional supermarkets, where the offer of private label organic foods is constantly growing, or through various forms of community supported agriculture, such as the box schemes, and the purchase solidarity groups. Also the direct marketing with home delivery through internet is steadily growing at interesting prices.

The specialized organic retailers should find a better strategy to keep their clients: more aggressive promotions, more and better loyalty programs, more advertisement and mainly better communication, to explain in details all motivations for organic produces and for their purchasing at the specialised organic points of sale. More and diversified events should be organized at the shop, from comparative guided tasting of products to cooking classes, from guided tours to nearby farmers and processing firms, to classes about all sorts of subjects (health, environment, history, development, philosophy, etc.). Thanks to all these types of activities, the specialized organic shops can differentiate themselves from the other organic marketing channels and stay alive and prosper in a very competitive environment.

Taking into account that the entire retail system is in continuous evolution [4], with mergers, acquisitions and new openings, and that the organic share of the food market keeps expanding, further research is clearly needed, to cover other typologies of marketing channels and to explore the behaviour and motivations of consumers who purchase their foods in different marketing channels.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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