The Motivational Profile of Organic Food Consumers: a Survey of Specialized Stores Customers in Italy

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Abstract — Organic food demand is becoming increasingly important throughout the world. Despite this relevance, however, not many attempts have been carried out to profile this food market segment. This paper aims to investigate on motivations that drive consumers towards purchasing organic foods in Italy. Through a survey carried out in some organic specialized stores sited in Sardinia, we explored organic consumer behaviour with specific emphasis on understanding reasons consumers have to buy organic products. A Multiple Correspondence Analysis has obtained four consumers' motivational profiles and several findings. Furthermore, a Logit regression allowed us to evaluate the relationships between individual motivations and some socio-demographic characteristics of organic consumers. Some marketing and policy implications arisen from the obtained results.

Keywords — Organic food purchase, Consumer's motivational profilers, Logit regression.

I. INTRODUCTION

Organic farming is becoming increasingly popular throughout the world. In 2005, the world organic land amounted to 30.6 million hectares [1]. Regarding market, sales for organic food actually exceeds 30 billion euros, (+43% since 2002). The weight of organic products on the world food consumption is around 2-3%, but it tends to be higher in North America and Europe, where since years organic market has strongly developed [1,2].

On the other hand – with specific regard to Europein some countries the market for organic food faces some limitations [3,4]. Somewhere organic consumption has not increased at the same rate than production and/or a lack of specific strategies for organic products can be observed. It is a fact that in these markets, it becomes a priority to identify customer profiles in order to calibrate marketing strategies. As a consequence, well-suitable strategies and policies should increase potential organic food market, producing positive effects for organic farming on the whole. More in depth, promotion of rational market-oriented policies should allow organic farmers – that play a relevant role in promoting multifunctional agriculture – to be less dependent by public subsidies.

Regarding Italy, for example, some authors have underlined that, despite a significant demand for organic food, not many attempts have been carried out to profile this relevant food market segment [4,5]. To be more precise, little attention has been put on detecting consumer motivations. On the contrary, understanding motivations driving organic consumption should allow private and public decision makers to better defining consumer profiles in order to support a more efficient meeting between supply and demand.

In the light of these considerations, this paper aims to investigate on motivations that drive consumers towards purchasing organic foods in Italy. Through a survey carried out in some organic specialized stores sited in Sardinia, we explored organic consumer behaviour with specific emphasis on understanding reasons consumers have to buy organic products. The choice to conduct analysis only regarding organic specialized stores comes from the need to focus the attention only on regular organic products consumers.

The study is organised in two different steps. Firstly, on the basis of questionnaire answers formulated by consumers, some different organic consumer profiles are identified and described according to individual motivations that would move people to buy organic foods. Α Multiple Correspondence Analysis applied for is identification the profiles. Secondly, of relationships between individual motivations and some socio-demographic characteristics organic consumers are evaluated by some Logit regressions.

Section 2 briefly illustrates the literature on the theme. Section 3 is focused on data description and reports some summary statistics. Models and variables used in the analysis are described in Section 4. Main results are discussed in Section 5 as well as some concluding remarks are expressed in Section 6.

II. BACKGROUND

In the last years, a wide literature has been produced on the theme of consumer demand for organic food. Most of the studies have been focused on the relationships between consumer characteristics, product attributes and organic food consumption tendency¹. As underlined by Thompson [6] and Dimitri and Greene [7] these studies have generally relied almost exclusively on self-reporting of purchase behaviour and attitudes as elicited trough interviews.

It is a fact that demand analysis has been mostly detected in terms of *willingness to pay* (WTP) for purchasing organic rather than conventional products. These studies reveal conflicting results about relationship between consumer willingness to pay a *premium price* for organic food, product attributes and socio-demographic and behaviour characteristics [e.g., 3, 8,9,10,11,12,13,14,15]².

Alternatively, there have been also a number of studies in which willingness to purchase organic products is investigated not only in terms of *premium price*, but with reference to consumer attitudes to prefer organic rather than conventional food on the whole [16,17,18,19].

Among the other objectives, these papers aim to explore how buyers of organic products differ from their conventional counterparts in lifestyle and attitudes, the structure of consumer preferences and the relative importance of product attributes, and consumer perceptions regarding some commercial aspects (*e.g.*, quality, availability).

Although the large literature, little has been done to understand the reasons consumers have to purchase or not organic food. Vice versa, detecting into motivations driving consumer choices should be recommended in order to better understand organic food market and to provide suitable strategies and policies.

Dimitri and Greene [7] report that health, taste and environmental safeguard are the main inherent reasons for purchasing organic food. The same factors were individuated by Gil *et al.* [11] among the factors that principally switch consumers towards organic products.

In a recent article, Roitner-Schobesberger *et al.* [20] found that about 90% of people interviewed in Thailand think that organic foods is healthy and good for the environment. On the other hand, Cicia *et al.* [4] identified evocation (*i.e.*, nostalgic feelings and, as a consequence, safeguard of some traditional products or processes) and curiosity among these factors. Applying a *Means-End Chain* analysis, these authors found that health and environmental effects are the most important motivations for consumers buying organic products in an Italian region (Campania). Findings arisen from an other *Means-End Chain* application on the Italian market suggest that health and individual wellness are the main reasons that move organic consumers to prefer these products [5].

III. DATA AND SUMMARY STATISTICS

Data were gathered from a survey made during 2007 in some organic specialized stores throughout Sardinia (Italy). Information were collected by direct interviews administrated to a sample of 100 buyers that regularly purchase food in some specialized stores.

Questionnaire was subdivided in different sections.

In the first one, we asked to the buyers some information about their *knowledge* of organic food ("How long have you known organic food?"), their experience as organic consumer (How long have you purchased organic food?"), and frequency in purchasing organic products ("How often do you purchase organic food?").

In the second section, we collected information about the types of products regularly purchased in a specialized store. Furthermore, with reference to each

¹ See [6,7,8] for more information about this literature.

Presence of conflicting findings should partially depend on application of different methodological approaches among authors [7].

product, the customers were asked if they exclusively purchase organic food or not.

In the third section, we obtained some descriptive and socio-demographic information about consumers. More in detail, by each interviewed person we gathered data about age, gender, education and household size.

The last section was targeted to know motivations that affect organic food consumption. The following question was formulated to each buyers: "Why you purchase organic products?". Certain possible motivations were a priori individuated for "setting" answers in a limited range of possible options. More specifically, according to some empirical results found in the literature, we individuated six different motivations:

- 1. Organic food is <u>health</u>ier than conventional food;
- 2. Organic food is more <u>taste</u>ful than conventional food;
- 3. Organic food tends to safeguard <u>environment</u> more than conventional food;
- 4. Purchasing organic food contributes to help <u>farm</u> <u>incomes</u>;
- 5. Purchasing organic food permits to safeguard some traditional products and activities
- 6. Curiosity

A multiple answers option was allowed to each respondent in order to have a comprehensive frame. Some descriptive statistics relative to the sampled consumers are reported in the following tables. More than 3/4 of the respondents (77%) were female (Table 1). Because of typically females tend to have more responsibility than males (in a family) for food shopping, it should be noted that this is a common finding in this type of survey.

Somewhat young people formed a large quote of the participants. Indeed, only 16% of the respondents were 51 years old or more. Particularly, in the 35% of the observation the age of interviewed people was included from 41 to 51 years. Furthermore, interviewed people had more formal education. Approximately a good half-sample completed a high school program and 34% of the respondents were graduate or got a post-graduate education. Regarding the household size, 22% of the respondents lived in a

2-people family, while people that lived in families formed by 3 and 4 people amounted to 29% and 30% respectively. Not negligible the singles (14%).

Table 1 - Socio-demographic sample characterization

VARIABLE	TOTAL SAMPLE		
	(n. = 100)	%	
Gender			
Male	23	23%	
Female	77	77%	
Age			
≤ 20 years of age	2	2%	
21-30	21	21%	
31-40	26	26%	
41-50	35	35%	
51-60	11	11%	
≥ 61	5	5%	
VARIABLE	TOTAL SAMPLI	E	
	(n. = 100)	%	
Education			
Primary school	3	3%	
Intermediate school	14	14%	
High school	49	49%	
Graduate college	34	34%	
Household size			
Single	14	14%	
2 people	22	22%	
3 people	30	30%	
4 people	29	29%	
≥ 5 people	5	5%	

Table 2 reports answers relative to organic products that respondents regularly purchased.

More than 60% of the interviewed customers bought rice and durum wheat pasta (60% and 67% respectively). Sauces and soups, too, showed significant appreciation (65% of the sample purchased them).

Among the most relevant marketable organic products, wine was bought by 25% of respondents, while the correspondent quote regarding olive oil, milk (and dairy) and biscuits amounted to 35%, 31% and 22% respectively.

Table 3 shows answers relative to the main motivations that orient interviewed customers towards organic purchasing. For about 90% of the respondents, organic food is healthier than the conventional one. Furthermore, environment value turns out to be the second most important motivation to consumer purchasing organic food (72%). On the other hand, approximately 40% of the sample consumers declare

to prefer organic food by a hedonistic point of view (taste).

Table 2 - Organic products purchased by the survey respondents

PRODUCTS	TOTAL SAMPLE		
	(n. = 100)	%	
Rice	60	60%	
Pasta	67	67%	
Honey	39	39%	
Olive oil	35	35%	
Milk and dairy	31	31%	
Conserves	23	23%	
Flours	45	45%	
Legumes	53	53%	
Sauces and soupes	65	65%	
Wine	25	25%	
Biscuits	22	22%	
Tea and herb teas	45	45%	
Spice	40	40%	
Ice creams	30	30%	
Others	11	11%	

Rather significant is also the incidence of respondents that think purchasing organic products could positively affect farmers income (23%). Finally, curiosity and safeguard of traditional activities are recognized as motivations by 11% and 9%, respectively.

Table 3 - Motivations for purchasing organic food - observed frequencies

MOTIVATIONS	TOTAL SAMPLE		
	(n. = 100)	%	
1) OF is <u>health</u> ier	89	89%	
2) OF is more <u>taste</u> ful	39	39%	
3) OF tends to safeguard environment	72	72%	
4) Purchasing OF contributes to help <u>farm incomes</u>	23	23%	
5) Purchasing OF safeguards <u>tradition</u> al activities	9	9%	
6) <u>Curiosity</u>	11	11%	
7) Other motivations	12	12%	

IV. METHODOLOGY AND VARIABLES

Multiple Correspondence Analysis (MCA). MCA allows one to analyze the pattern of relationships of several categorical dependent variables [21]. By a technical point of view, MCA is used to analyze a set of observations described by a set of nominal variables. Each nominal variable comprises several levels, and each of these levels is coded as a binary variable (0 and 1). MCA aims to attribute factor scores to each observation and to each category in order to represent relative frequencies in terms of the distances between individual rows and/or columns in a low-dimensional space³.

MCA is obtained by using a standard correspondence analysis on an indicator matrix (X). This is a J x M matrix where J_k is the vector of the levels for each K nominal variable (with $\sum J_k = J$), and M is the number of observations. Performing MCA on X will provide two sets of factor scores: one for the rows and one for the columns. These factor scores are, in general scaled such that their variance is equal to their corresponding eigenvalue.

In MCA, proximities are meaningful only between points from the same set (*i.e.*, rows with rows, columns with columns). In other terms, when two row points are close to each other they tend to select the same levels of the nominal variables. However, we need to distinguish two cases:

- 1) the proximity between levels of *different* nominal variables means that these levels tend to appear together in the observations;
- 2) because the levels of the *same* nominal variable cannot occur together, the proximity between levels means that the groups of observations associated with these two levels are themselves similar.

We remand to [21,22] for more detailed information about MCA properties and goals.

In this study, analysis should allow us to put on evidence relationship between the six individuated motivations that lead organic consumer choices. Trough a representation in a low-dimensional space – designed on the basis of few principal components -

³ For its inherent nature, MCA can be also view as a generalization of principal component analysis when the variables are categorical instead of quantitative.

we aimed to define some clusters (profiles) for organic consumers.

In this study, MCA is carried out by building a J x M indicator matrix (X), where $J_k = 2$ (yes or no sensitivity for each motivation) is the vector of the levels for each K nominal variable; K = 6 are the nominal variables represented by the number of motivations and M = 100 are the number of observations.

<u>Logit model</u>. Logit is a regression model commonly used in settings where the dependent variable is binary [23]. Generally, in analyses carried out from surveys, dependent variable is a yes/no answer to the administrated question and the dependent variable reflects probability of observing a positive answer. Therefore, the empirical specification of the binary yes/no choice can be formulated in this terms:

(1a)
$$P(Yes|x_i) = F_{\eta}(Z_i) = F(\alpha + \beta x_i) = \frac{1}{1 + e^{-Zi}}$$

where P_i is the probability of observing a positive answer; $F_{\eta}(\bullet)$ is the value of logistic cumulative density function associated with each possible value of the underlying index Z_i ; X_i is a vector of independent explanatory variables; α is the intercept; β is a vector of unknown parameters, and:

(1b)
$$Z_i = \log\left(\frac{P_i}{1 - P_i}\right) = \alpha + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_n x_n + \varepsilon$$

Because the data source contains generally individual information, the estimation method of choice ordinarily used is the maximum likelihood method. The dependent variable Z_i in (1) is the logarithm of the probability that a particular choice will be made.

In order to evaluate relationship between some socio-demographic and consumption individual characteristics and propensity to purchase organic products we applied a *logit* model to the data. More specifically, since our finality was to investigate on motivations that drive consumers to buy organic rather than conventional food, we adopted six different logit models (one for each individuated motivation).

In the light of (1), the developed model was described as follows:

(2) Motivation $(Yes|x_i) = \alpha + \beta_1 Knowledge + \beta_2$ Experience $+ \beta_3 Frequency + \beta_4 Organic + \beta_5$ Gender $+ \beta_6 Education + \beta_7 Age + \beta_8$ Household size $+ \varepsilon$

A description of the x_i variables referred to each interviewed consumer is reported in Table 4.

Table 4a - Socio-demographic sample characterization

VARIABLE DESCRIPTION		
MOTIVATION	P	it assumes a value equal to 1 in case of positive answer to the question, and 0 otherwise
KNOWLEDGE	X_1	it reflects the question: "How long have you known organic food?" 1 = since 1-3 years; 2 = 3-5 years; 3 = 5 or more years
EXPERIENCE	X_2	it reflects the question: "How long have you purchased organic food?" 1 = less than 1 month; 2 = 1-6 months; 3 = 1-3 years; 4 = more than 3 years
FREQUENCY	X ₃	it reflects the question: "How often do you purchase organic food?" 1 = rarely; 2 = about one time every month; 3 = every week; 4 = more than one time every week
ORGANIC	X_4	1 if consumer usually or always purchase organic food (relative to particular kinds of product) and 0 if otherwise
GENDER	X_5	1 if male, 0 if female
EDUCATION	X_6	1 = primary school; 2 = intermediate school; 3 = high school; 4 = graduate college (or post-graduate education)

Table 4b- Socio-demographic sample characterization

VARIABLE	DESCRIPTION
AGE X ₇	1 = less than 20 years old; 2 = 21-30 years old; 3 = 31-40 years old; 4 = 41-50 years old; 5 = 51-60 years old; 6 = more than 60 years old
$\begin{array}{ccc} \text{HOUSEHOLD} & & X_8 \\ \text{SIZE} & & \end{array}$	1 = single; 2 = 2 people; 3 = 3 people; 4 = 4 people; 5 = 5 or more people

V. MAIN RESULTS AND DISCUSSION

MCA results show how much is difficult to classify organic consumers by the reasons driving the demand. The sum of the eigenvalues of the two dimensions is only 0.51, quite equally divided. Nevertheless, MCA has produced some interesting suggestions: let us take a look at Figure 1 during their discussion. The first axis) dimension (horizontal clearly separates consumers driven by *curiosity* towards organic foods (negative values) from the others, with particular reference to those inspired by the willingness to support farm incomes. This result can be interpreted as a clear suggestion to use the first dimension as occasional/regular organic food consumption indicators. The second dimension (vertical axis) is mainly devoted to the identification of buyers aware of traditional food products, but gives similar and significant discriminating power to the reasons located at the opposite extremes in the horizontal axis, i.e. curiosity and farm income support. On the other hand, the vertical dimension reserves (low) positive values only to healthiness reasons for consuming organic products. For all these arguments it is opportune to the variables quantification along dimensions with the aim of drawing different organic food consumers' profiles.

In the first quadrant we can see positive values for both dimensions, what means to identify regular as well as safety sensitive consumers: this profile can be synthesized by the "certified true organic consumer" label. 43% of costumers surveyed show to belong to this profile. The opposite characteristics can be found in the third quadrant, where *curiosity* is the dominant reason of purchasing organic food. For the customers showing negative values for both dimensions can be proposed the synthetic "extemporaneous organic food consumer" label.

Only 13% of the sample surveyed is located in the third quadrant: it is not a surprising result when considering that interviews have been made in specialized stores mostly patronized by regular consumers. The second quadrant of the Cartesian plan contains positive values of the first dimension together with negative values of the second one.

This means that here one can find regular as well as aware consumers. In other words, people belonging to this profile can be synthetically defined as "solidarity-driven organic food consumers", where this label has to be interpreted in the wide sense of the symbolic meaning given to the organic food purchasing act. The consumers labeled in this way account for the 23% of the sample surveyed.

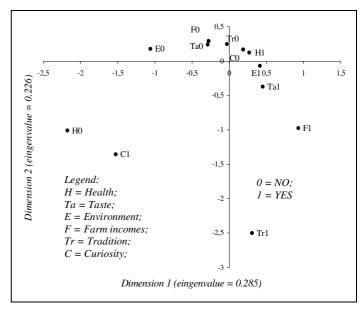


Figure 1- Results arisen form MCA

On the opposite side of the Cartesian space, in the fourth quadrant, we can identify the opposite profile of consumer: not regular as well as healthiness aware. An appropriate label of this kind of customer is "selfish"

<u>organic food consumer</u>". The remaining 21% of the sample survey belong to this profile.

The four consumer profiles designed above can be analyzed in depth by the support of stepwise logit models where the relationships between organic food purchasing reasons and socio-demographic variables are detected. Table 5 summarizes the obtained results. Let us discuss the most important among them.

The p-values associated to the Hosmer-Lemeshow index (with $\alpha = 0.05$) suggests that all the six models should be well calibrated to the data⁴.

The *safety* model confirms the impression given by MCA when first quadrant observations, labeled "certified true organic food consumers" were associated to healthiness reasons for purchasing these kind of goods: safety is strictly related to expert and regular customers of organic food retailers. These results are coherent with the high proportion (89%) of consumers indicating healthiness among the reasons inspiring the choice of organic food. It is a confirmation of several empirical studies on organic food demand [*e.g.*, 4].

The *taste* model tells us that the hedonistic approach is circumscribed to the only expert consumers, who evidently exploit personal satisfaction when eating organic foods.

This fact has to be related to the experience accumulated by this category of individuals: experience supports consumers in the selection of foods; experience gets consumers used to specific tastes and makes them stuck by organic foods. Although taste cannot be considered the most important reason inspiring expert consumers, at least not more than safety, it is a widespread driving factor declared by the surveyed customers. Then, we have to consider it as an additional element completing the shape of the "certified true organic consumer" profile.

The *environment* model offers some interesting results. First, the most significant character related to environment supporting reasons for purchasing organic foods is the household size: singles and low sized rather than large families indicate this factor when justifying their purchasing behavior.

Table 5a - Estimated parameters of the Logit models

X 7•.1.18		C - C-4	
Variables ^a	0	Safety	
Comptent	- 1.601	S.E.	<i>p</i>
Constant	-1.001	0.964	0.097
Knowledge Purchase experience	1.071	0.289	0.000
Frequency	1.071	0.269	0.000
Organic	1.132	0.761	0.137
Gender	1.132	0.701	0.137
Education	-	-	_
Age	_	_	_
Household size	-	-	_
Household size	_	_	_
L^2	-26.317		
Hosmer-Lemeshow	0.572		
Variables ^a	0.072	Taste	
	В	S.E.	р
Constant	-1.859	0.654	0.004
Knowledge	-	-	-
Purchase experience	0.521	0.222	0.019
Frequency	-	-	-
Organic	_	-	_
Gender	_	_	_
Education	_	-	_
Age	_	-	_
Household size	_	-	_
L^2	-63.846		
Hosmer-Lemeshow	0.387		
Variables ^a		Environment	
Variables ^a	В	Environment S.E.	p
Constant			p 0.016
Constant Knowledge	В	S.E.	
Constant	В	S.E.	
Constant Knowledge Purchase experience Frequency	B 2.455	S.E. 1.017	0.016
Constant Knowledge Purchase experience Frequency Organic	2.455 0.336	S.E. 1.017 - 0.230	0.016 - 0.144 -
Constant Knowledge Purchase experience Frequency Organic Gender	B 2.455	S.E. 1.017	0.016
Constant Knowledge Purchase experience Frequency Organic Gender Education	2.455 0.336	S.E. 1.017 - 0.230	0.016 - 0.144 -
Constant Knowledge Purchase experience Frequency Organic Gender Education Age	2.455 - 0.336 - - -0.869	S.E. 1.017 - 0.230 - 0.565	0.016 - 0.144 - - 0.124 -
Constant Knowledge Purchase experience Frequency Organic Gender Education	2.455 0.336	S.E. 1.017 - 0.230	0.016 - 0.144 -
Constant Knowledge Purchase experience Frequency Organic Gender Education Age Household size	2.455 - 0.336 	S.E. 1.017 - 0.230 - 0.565	0.016 - 0.144 - - 0.124 -
Constant Knowledge Purchase experience Frequency Organic Gender Education Age Household size	2.455 - 0.336 	S.E. 1.017 - 0.230 - 0.565	0.016 - 0.144 - - 0.124 -
Constant Knowledge Purchase experience Frequency Organic Gender Education Age Household size L ² Hosmer-Lemeshow	2.455 - 0.336 	S.E. 1.017 - 0.230 - 0.565 - 0.238	0.016 - 0.144 - - 0.124 -
Constant Knowledge Purchase experience Frequency Organic Gender Education Age Household size	2.455 - 0.336 	S.E. 1.017 - 0.230 - 0.565 - 0.238	0.016 - 0.144 - - 0.124 -
Constant Knowledge Purchase experience Frequency Organic Gender Education Age Household size L² Hosmer-Lemeshow Variables a	2.455 - 0.336 	S.E. 1.017 - 0.230 - 0.565 - 0.238 Tradition S.E.	0.016 - 0.144 0.124 - 0.003
Constant Knowledge Purchase experience Frequency Organic Gender Education Age Household size L² Hosmer-Lemeshow Variables a Constant	2.455 - 0.336 	S.E. 1.017 - 0.230 - 0.565 - 0.238	0.016 - 0.144 - - 0.124 - 0.003
Constant Knowledge Purchase experience Frequency Organic Gender Education Age Household size L² Hosmer-Lemeshow Variables a Constant Knowledge	2.455 - 0.336 	S.E. 1.017 - 0.230 - 0.565 - 0.238 Tradition S.E.	0.016 - 0.144 0.124 - 0.003
Constant Knowledge Purchase experience Frequency Organic Gender Education Age Household size L² Hosmer-Lemeshow Variables a Constant Knowledge Purchase experience	2.455 - 0.336 	S.E. 1.017 - 0.230 - 0.565 - 0.238 Tradition S.E.	0.016 - 0.144 0.124 - 0.003
Constant Knowledge Purchase experience Frequency Organic Gender Education Age Household size L² Hosmer-Lemeshow Variables a Constant Knowledge Purchase experience Frequency	2.455 - 0.3360.8690.70851.967 - 0.626	S.E. 1.017 - 0.230 - 0.565 - 0.238 Tradition S.E. 3.164	0.016 - 0.144
Constant Knowledge Purchase experience Frequency Organic Gender Education Age Household size L² Hosmer-Lemeshow Variables a Constant Knowledge Purchase experience Frequency Organic	2.455 - 0.336 	S.E. 1.017 - 0.230 - 0.565 - 0.238 Tradition S.E.	0.016 - 0.144 0.124 - 0.003
Constant Knowledge Purchase experience Frequency Organic Gender Education Age Household size L² Hosmer-Lemeshow Variables a Constant Knowledge Purchase experience Frequency Organic Gender	2.455 - 0.3360.8690.708 - 51.967 - 0.626 8 -8.642	S.E. 1.017 - 0.230 - 0.565 - 0.238 Tradition S.E. 3.164 - 0.868	0.016
Constant Knowledge Purchase experience Frequency Organic Gender Education Age Household size L² Hosmer-Lemeshow Variables a Constant Knowledge Purchase experience Frequency Organic Gender Education	2.455 - 0.3360.8690.708 - 51.967 - 0.626	S.E. 1.017 - 0.230 - 0.565 - 0.238 Tradition S.E. 3.164 - 0.868 - 0.626	0.016
Constant Knowledge Purchase experience Frequency Organic Gender Education Age Household size L² Hosmer-Lemeshow Variables a Constant Knowledge Purchase experience Frequency Organic Gender Education Age	2.455 - 0.3360.8690.708 - 51.967 - 0.626 8 -8.642	S.E. 1.017 - 0.230 - 0.565 - 0.238 Tradition S.E. 3.164 - 0.868	0.016
Constant Knowledge Purchase experience Frequency Organic Gender Education Age Household size L² Hosmer-Lemeshow Variables a Constant Knowledge Purchase experience Frequency Organic Gender Education	2.455 - 0.3360.8690.708 - 51.967 - 0.626	S.E. 1.017 - 0.230 - 0.565 - 0.238 Tradition S.E. 3.164 - 0.868 - 0.626	0.016
Constant Knowledge Purchase experience Frequency Organic Gender Education Age Household size L² Hosmer-Lemeshow Variables a Constant Knowledge Purchase experience Frequency Organic Gender Education Age Household size	2.455 - 0.3360.8690.70851.967 - 0.626 8 -8.6421.484 - 1.077 - 0.872	S.E. 1.017 - 0.230 - 0.565 - 0.238 Tradition S.E. 3.164 - 0.868 - 0.626	0.016
Constant Knowledge Purchase experience Frequency Organic Gender Education Age Household size L² Hosmer-Lemeshow Variables a Constant Knowledge Purchase experience Frequency Organic Gender Education Age	2.455 - 0.3360.8690.708 - 51.967 - 0.626	S.E. 1.017 - 0.230 - 0.565 - 0.238 Tradition S.E. 3.164 - 0.868 - 0.626	0.016

⁴ This statistic examines the difference between the observed frequency and the expected frequency for deciles of data [23]. The value is compared to a χ^2 distribution with g-2 degrees of freedom (g is equal to the number of deciles).

Table 5b - Estimated parameters of the Logit models

Variables ^a	F	arm incomes	
	В	S.E.	р
Constant	0.883	11.858	0.001
Knowledge	-	-	-
Purchase experience	0.284	5.231	0.022
Frequency	-	-	-
Organic	-	-	-
Gender	-	-	-
Education	-	-	-
Age	-	-	-
Household size	-	-	-
L^2	-50.811		
Hosmer-Lemeshow	0.279		
Variables ^a		Curiosity	
	В	S.E.	р
Constant	0.953	0.848	0.261
Knowledge	-	-	-
Purchase experience	-0.407	0.295	0.169
Frequency	-0.830	0.403	0.040
Organic	-	-	-
Gender	-	-	-
Education	-	-	-
Age	-	-	-
Household size	-	-	-
L^2	-27.945		
Hosmer-Lemeshow	0.475		

This is an interesting result when compared to the findings of some studies carried out in USA [17,25], where a positive relationship between household size and willingness to buy organic products has been observed.

Women and, with a lower degree of significance, expert consumers complete the environment-friendly costumers' profile. Gender is confirmed to be a little contributor to explaining differences in organic purchase behavior [6]. Environment protection is, excluding safety, the most frequently reason declared by the consumers surveyed. Safety and environment protection reasons do not exclude each other, but they can also cohabit in the same individual. Nevertheless, this model gives us some information about the specific characteristics of organic food consumers explicitly aware of environment.

Another symbolic insight of the organic foodpurchasing act is the safeguard of traditional agricultural products. Only 9% of individuals surveyed included it among the factors driving their choice in

favor of organic foods. The tradition model shows that this reason is preferred by older consumers as well as by individuals who attained a high level of education. The relationship between age and tradition was well expected; on the other side, education is an interesting descriptive parameter of this symbolic purchasing behavior. These results add some information to what observed by different authors [e.g., 26,27] who found that higher educational degree attainment lowers the probability of choosing organic products or of considering organic produce better. Well, here we can find that high educated organic consumers are, most of all, attracted by symbolic motives such as traditional products safeguard. At the same time, traditional products support is not a driving factor for regular organic foods consumers, but seems to characterize the occasional ones.

Farm income support appears to be significantly related to only purchase experience. The model complete the "certified true organic food consumer" profile, giving other elements for the relative characterization and the description of the symbol-driven purchasing behaviors.

The results coming from the *curiosity* model confirm the location of this profile at the opposite side of the Cartesian space, where are located the extemporaneous consumers. Curiosity cannot be a coherent reason for expert and regular customers. The model confirms this argument and does not add more information.

A survey of these results allows us to express some considerations. First, "organic exclusive" consumers look for safety rather than for other contents in the food, with special reference to traditional products support; second, a long experience in consuming organic foods is strictly related to safety and taste reasons for purchasing them; third, regular consumers are conditioned by environmental problems as well as by the willingness to support farm incomes; last, organic foods demonstrate to have attractive power of new consumers when raising curiosity.

Given the importance of price policies, marketing strategies promoting organic food consumption have to consider the characteristic shapes of these profiles. Additional sales can be pursued encouraging higher pro capita consumptions and/or trying to persuade a larger number of consumers. Individual consumption

of organic foods can be stimulated by the promotion of conventional foods substitution in the shopping basket as well as by promoting consumers' loyalty. Price policies are important in this strategy. Moreover, this study suggests some promotional arguments for differentiation strategies aimed to increase individual consumptions: safety certification is a powerful tool for persuading consumer to substitute conventional foods; environment and farm solidarity motives make organic food purchasing an usual and regular consumer's act; a good taste, more generally a good quality food, stimulates the customer's loyalty to organic foods in the long term. A larger number of organic consumers can be attracted by the curiosity that these goods are able to move: aggressive promotional campaigns played on prices, information and tasting panels can produce effective results.

These arguments give the sense of this study: organic food cannot sell itself but needs efficient and customized marketing strategies. An institutional label attached on the organic food packaging is not a sufficient tool for an effective differentiation of supply. Information, quality, promotion, technical efficiency, tailor-made production and distribution, as well as incisive price policies, are some relevant key words of this approach. This is the only way for the true internalization of several external economies produced by multifunctional agriculture.

VI. SOME FINAL REMARKS

This study is devoted to design the motivational profiles of organic food consumers. Four consumers' motivational profiles and several findings have been obtained by the analysis. Among these, some are noteworthy. Safety confirms to be the most important driving factor for organic food consumers. safeguard is less important Environment distinguishes some segments of customers, such as large families components, women and expert consumers. The latter indicate taste as a relevant requirement of organic foods, which are able to move curiosity of new customers. Symbolic insights, i.e. tradition and farm income support, are powerful elements for raising consumers' loyalty and for target segmentation.

All these findings need to be further verified by other wider surveys. Nevertheless, they indicate by now the opportunity of targeted marketing strategies for helping organic foods to enlarge market sizes. The time of the unconditioned public support has gone by and producers have to play their role in the competitive arena. Given that price is still the most important factor for any market enlargement strategy, suppliers cannot ignore the opportunities offered by differentiation any more. A larger organic food market is going to be the basis and the expression of the social acknowledgment of some important agricultural functions, what means to improve the efficiency of policies devoted to promote the European Agricultural Model, i.e. sustainable, competitive and rural development promoter.

REFERENCES

- 1. Willer H., Yussefi M. (eds.) (2007) The World of Organic Agriculture 2007. Statistics and Emerging Trends. IFOAM Publication.
- Sahota A. (2006) The Global Market for Organic Foods & Drinks. Oral presentation at the Biofach Conference, Nurnberg, Germany, February 16-19, 2006.
- 3. Soler F., Gil K.M.. Sanchez M. (2002) Consumer's Acceptability of Organic Food in Spain: Results from an Experimental Auction Market. British Food Journal 104 (8): 670-687.
- 4. Cicia G., Del Giudice T., Ramunno I., Tagliaferro C. (2006) Splitting Consumer's Willingness to Pay Premium Price for Organic Products over Purchase Motivations. Paper discussed at the 98th Seminar of the European Association of Agricultural Economics (EAAE) Marketing Dynamics within the Global Trading System: New Perspectives, Chania, Crete, Greece, June 29 July 2, 2006.
- 5. Zanoli R., Naspetti S. (2005) Means-End Chain Analysis: an Application tot the Study of the Organic Consumer. Rivista di Economia Agraria 60 (1): 9-38.
- 6. Thompson G. (1998) Consumer Demand for Organic Foods: What We Know and What We Need to Know. American Journal of Agricultural Economics 80 (5): 1113–1118.
- 7. Dimitri C., Greene C. (2002) Recent Growth Patterns in the U.S. Organic Foods Market, USDA. Economic Research Service, Market and trade Economics Division and Resource Economics Division, Agriculture Information Bulletin 777.

- 8. Batte M.T., Hooker N.H., Haab T., Beaverson J. (2007) Putting Their Money Where Their Mouths are: Consumer Willingness to Pay for Multi-Ingredient, Processed Organic Food Products. Food Policy 32 (2): 145-159.
- 9. Underhill S., Figueroa E.E. (1996) Consumer Preferences for Non-conventionally Grown Produce. Journal of Food Distribution Research 27 (2): 56–66.
- Govidnasamy R., Italia J. (1999). Predicting Willingness to Pay a Premium for Organically Grown Fresh Produce. Journal of Food Distribution Research 30 (2): 44-53.
- 11. Gil J.M., Gracia A., Sanchez M. (2000) Market Segmentation and Willingness to Pay for Organic Products in Spain. International Food and Agribusiness Management Review 3 (2): 207-226.
- Loureiro M., Hine S.E. (2002) Discovering Niche Markets: A Comparison of Consumer Willingness to Pay for Local (Colorado Grown) Organic, and GMO-Free Product. Journal of Agricultural & Applied Economics 34 (3): 477–487.
- 13. Gil J.M., Soler F. (2006) Knowledge and Willingness to Pay for Organic Food in Spain: Evidence from Experimental Auctions. Food Economics Acta Agriculturae Scandinavica C 3 (3/4): 109-124
- 14. Rodriguez E., Lacaze V., Lupin B. (2007) Willingness to Pay for Organic Food in Argentina: Evidence from a Consumer Survey. Paper discussed at the 105th Seminar of the European Association of Agricultural Economics (EAAE) "International Marketing and International Trade of Quality Food Products", Bologne, Italy, March 8-10, 2007.
- 15. Shuzzler A., Govindasamy R., Adelaja A. (2003) A Comparative Evaluation of Organic Produce Consumers in New Jersey to New York and Pennsylvania. Journal of Food Distribution Research 34 (1): 153-162.
- Byrne P.J., Toensmeyer U.C., German C.L., Reed Muller H. (1992) Evaluation of Consumer Attidudes Towards Organic Produce in Delaware and the

- Delmarva Region. Journal of Food Distribution Research 23 (1): 29-44.
- 17. Huang C.L. (1996) Consumer preferences and Attitudes Towards Organically Grown Products. European Review of Agricultural Economics 23 (3): 331-342.
- 18. Williams P.R.D., Hammitt J.K. (2000) A Comparison of Organic and Conventional Fresh produce Buyers in the Boston Area. Risk Analysis 20 (5): 735-746.
- Wang Q., Sun J. (2003) Consumer Preferences and Demand for Organic Food: Evidence from a Vermont Survey. Paper discussed at the American Agricultural Economics Association (AAEA) Annual Meeting, Montreal, Canada, July 27-30, 2003.
- Roitner-Schobesberger B., Darnhofer I., Somsook S., Vogl C.R. (2008) Consumer Perceptions of Organic Foods in Bangkok, Thailand. Food Policy 33 (2): 112-121
- 21. Abdi H., Valentin D. (2007) Multiple Correspondence Analysis. in Salkind N. (ed.) Encyclopedia of Measurement and Statistics. Thousand Oaks (CA), Sage.
- 22. Greenacre M.J. (1984) Theory and Application of Correspondence Analysis. London, Academic Press.
- 23. Maddala G. S. (1983) Limited-Dependent and Quantitative Variables in Econometrics. Cambridge, University Press.
- 24. Hosmer D.W., Lemeshow S. (1989) Applied logistic Regression. New York, John Wiley & Sons, Inc.
- 25. Thompson G., Kidwell J. (1998) Explaining the Choice of Organic Produce: Cosmetic Defects, Prices, and Consumer Preferences. American Journal of Agricultural Economics 80 (2): 277-278.
- 26. Byrne P.J., Bacon J.R., Toensmeyer U.C. (1991) Analysis of Consumer Attitudes Towards Organic Produce and Purchase Likelihood. Journal of Food Distribution Research 22 (1): 49-62.
- 27. Groff A.J., Kreider C.R., Toensmeyer U.C. (1993) Analysis of the Delaware Market for Organically Grown Produce. Journal of Food Distribution Research 24 (2): 118-125.