

ORGANIC FOOD: A STUDY ON DEMOGRAPHIC CHARACTERISTICS AND FACTORS INFLUENCING PURCHASE INTENTIONS AMONG CONSUMERS IN PONTINA PROVINCE

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Abstract- This study presents the consumers' intention to purchase organic food products in Pontina Province(Italy). 280 consumers were interviewed using semi-structured questionnaires to examine the perception of the people about organic products and assess their readiness to pay for these products. The data obtained from the survey were analyzed using chi-square test and two way ANOVA. The main aim of this paper is to derive information that may contribute to better strategic and tactical marketing decisions. Results indicated that the intention to buy organic products are influenced by the perception about the value of organic products and by the belief on the health and safety of the product, and confirm that the main barrier to increasing the market share is consumer information. Moreover, the paper revealed that all respondents are willing to pay premium price, but the level of acceptability varies considerably .

Key words: Organic Food; consumer perception, purchase, price premium

I. INTRODUCTION

The increasing consumer demand for higher quality produce and food safety makes organic food an attractive option. In December 2000, the National Organic Standards Board of the U.S. Department of Agriculture (USDA) established a national standard for the term "organic." However, the most common definitions of an organically produced food emphasize product practices and principles used and the "organic philosophy" (Bourn & Prescott, 2002)

Organic food must be produced without the use of sewer-sludge fertilizers, most synthetic fertilizers and pesticides, genetic engineering (biotechnology), growth hormones, irradiation and antibiotics. (Wilkins & Hillers, 1994; Gregory N.G. 2000) A variety of agricultural products can be produced organically, including produce of grains, meat, dairy, eggs, and processed food products.

The market of organic products is growing as the number of people willing to eat organic food and pay premium price is increasing; in fact, in the last ten years, organic agriculture worldwide has been growing 10-12 percent per year while the overall food industry is growing 4-5 percent per year (FiBl/IFOAM 2012). This trend is fully confirmed when referred to the Italian market, where demand for health products has, over the five-year 2006/10, the highest growth rate in terms of purchase volumes. (ISMEA, 2012)

The future of organic agriculture will, to a large extent, also depend on consumer demand and their motive for paying extra price for organically grown food. Literature suggests that quality is a very subjective concept. In fact, most of the previous research findings indicated positive

value perceptions towards organic food products (Davies et al., 1995). Consumers perceive organic as a healthier alternative to conventional foods in that they contain more nutrients (Lea & Worsley, 2005; Padel & Foster, 2005; Baker et al., 2004; Lockie et al., 2002; Magnusson et al., 2001; Tregear et al., 1994; Wandel & Bugge, 1997) which enhance personal well being (Williams and Hammit, 2001), organic produce is also considered safer (Padel & Foster, 2005; Schifferstein & Oude Ophuis, 1998) and better in taste and more agreeable than conventional products (Baker et al., 2004; Fotopoulos et al., 2003).

It is highly important to examine the factors that might influence the tendency of consumer to buy organic food products. This research is believed could help to formulate a greater market communication and policy strategies in order to influence behavior toward organic food.

According to Lockie et al. (2002) the percentage of people consuming organic food products may increase as they experience a rise in income and normally organic food consumers are among those with high education level compared to non-organic consumers.

Different researchers conclude that a better understanding of consumers' perception of healthy foods and its determinants are key success factors for market orientation and development and for successfully negotiating market opportunities (Geeroms et al, 2008).

In the recent years several papers have reported empirical studies of consumer acceptance of healthy foods, based on data collection, especially in the EU, providing insights in the profile of functional (Bech-Larsen et al, 2007; Makela et

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& Niva, 2002; van Kleef et al, 2005; Verbeke, 2005; Urala &Lahteenmaki, 2006) and organic(Canavari et al, 2002; Canavari & Olson, 2007)

The aim of this study is to shed more light on perceptions of consumers about organic products and their willingness to pay for such products

II. OBJECTIVE

The research proposes a survey on organic consumers to collect data on:

1. the consumer’s attitude toward organic products;
2. the attributes of the products that are important in choosing organic food;
3. to assess consumers’ willingness to pay for organic products;
4. the level of confidence as in different sources of information and in the organic certification, inspection and control system.

The survey was conducted in October and November 2012.

III. METHODOLOGY

The method used for the data collection was a face-to-face interview, using a structured questionnaire, with closed-ended questions. (Flick U,2006) The questionnaire was found to have content and validity by a panel of experts consisting of sensory Laboratory members, Department of Economics - University of Cassino. Most items used in this test were adapted from (Davies et al, 1995; Batt et al. 2007). In total, 280 respondents participated . The data were collected during October and November 2012 from a stratified random sample of 180 consumers in Pontina Province

IV. RESULTS AND DISCUSSION

Demographic Analysis of the Respondents

The initial phase of the survey allowed the start - up methodology for an effective combination of reading according to the importance attached to certain factors (age, occupation, education level, etc.).(Tab. 1)

The age of the respondents varied from 18 to 65 years. The mean of age for the sample was 45.5 years old. The analysis of the frequencies shows that 58% of the organic consumers is female, aged between 35-50 years.

More than half of the respondents (67%) lived in families with four members, less than a quarter (26%) had two-three family members, about 2% lived alone, and 59% of the respondents, were married The study found that a majority (67%) of the surveyed consumers had heard about the organic products. However, they are often not sure which products are organic and which are not; these data are in concordance with that of Bhatta et al.,2008, who report that about 92% of consumers knew about organic agriculture. 14.3% of the organic consumers are graduate.

In the demographic variables, three of five variables indicated significant differences. Consumers with a lower level of education (40%) were least likely to have heard of organic agriculture; contrariwise those who had academic degrees seemed more likely to buy organic foods. Perhaps , the organic buyers were more likely to have children living

in their household, that relationship was significant (table 1). The significant effect of children in the household variable shows that children had an effect on changing the buying decisions of the parents when they were shopping in a market.

Table .1: DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

Variable	Number of interviewees	Unaware of organic term	Organic non-buyers	Organic buyers	Statistical p-value
Age	280	22.0	32.0	46.0	<0.001*
18-24	8	8	72	20	
25-35	24	9	16	22	
36-45	35	18	22	32	
45-55	20	25	21	27	
55 and above	5	40	22	9	
Gender					0.3662ns
Female	190	8.5	19.1	72.4	
Male	90	12.5	24.3	63.2	
Marital Status					0.009*
Single	84	8.5	33.4	58.1	
Married	132	17.3	18.9	63.8	
Married with kids	64	16.5	14.1	69.4	
Highest education level					0.001*
Primary school	36	20.0	9.3	70.7	
High school	182	11.2	23.4	65.4	
Bachelor	62	5.5	26.5	68.0	

*Statistically: p<0.05 (Chi-square test); Significance of the difference between groups.

Perceptions of the characteristics of organic products

Consumer actions regarding organic products stem from attitudes that in turn linked to a complex set of ideas, motivations and experiences (Fishbein & Ajzen, 1975; Asadi et al, 2009). Most of previous studies concluded that consumers purchase organic products because of a perception that such products are safer, healthier and more environmental friendly than conventionally produced alternatives (Krissoff B., 1998; Saba & Messina, 2003).

In this paper, general positive attitudes toward organic food were expressed. (table 2) Respondents think that organic food improves their health and that they can eat it without any fear, because organic food is safe . This attitude was also noted by Devcich et al. (2007). Consumers associate organic foods with "naturalness," "cleanliness," and the absence of any chemicals or additives (Uusitalo L., 1990; Chen, M. F. , 2007; Magistris & Gracia, 2008; Ahmad & Juhdi,2010).

TABLE 2: Relationship between influencing factors and intention to buy organic products

Factors	Gender		Mean %
	Male %	Female %	
Perception towards Organic			
Healthier	14.0	20.0	17.0
Environmentally friendly	16.0	15.0	15.5
Less chemical in production	16.0	12.0	14.0

The production and processing of organic food is strictly controlled	24.0	22.0	23.0
Availability of Product Information	20.0	21.0	20.5

To describe consumers perceptions towards the importance of different types of organic products in low Lazio respondents were requested to assess the importance of these products using a scale from 1 to 4 ranging from very low(1) to very high(4). As shown in fig.1 , respondents have some preferences on organic products; in particular, the most important organic products types were organic vegetable followed by fruits, organic animal products and cereal products.(figure n.1)

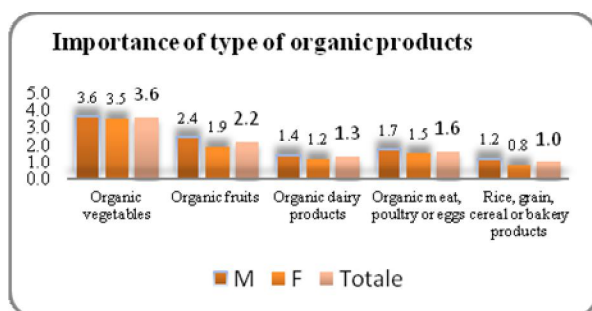


Fig.1: Importance of different types of organic products as perceived by respondents who have bought of organic The main reasons given for their preferences are health (75%), taste and palatability (18%) and good appearance and freshness (7%).

The majority of the consumers has been purchasing organic products for more than a year. In particular, almost a third of those interviewed have been consuming these products for more than 6 years. The distribution of the interviewees, in respect to the frequency of consumption variable indicates that almost 20% claims to consume organic products from once a month to every week.

Quality information, labeling, certification and advertisement play important role in knowledge enrichment. (Suh B. W., 2008). In particular, results showed that 28.5 percent of respondents used TV and radio for obtaining organic food products information, newspapers , friends, farmers and other types of information delivery was 14.9, 19.7,14.3 and 22.6 percent of total, respectively.(table n.3) .

TABLE 3 : Information delivery method for promoting organic products consumption by respondents who have bought of organic

Information delivery method *	M (%)	F (%)	Mean %
TV/ Radio	25.8	31.2	28.5
Newspaper/ magazines	16.8	13.0	14.9
Friends or relatives	18.4	21.0	19.7
EU informative campaigns	4.2	2.0	3.1
Organic shops	9.6	10.0	9.8
Farmers	14.3	14.3	14.3
Label	10.9	8.5	9.7

*Statistically: p<0.05 (Chi-square test); Significance of the difference between groups.

Respondents express their opinion on the need to improve the current level of information and also indicate the possible ways to do so by giving several options . In fact, the results show that consumers consider necessary information campaigns (23%) and improvement of the statements in the nutrition labels (25.5%), however, the logo draws their attention to on product performance (22.2%) .

Places to Shop for Organic Products

Organic products were mainly bought by organic food buyers from conventional supermarkets followed by natural and whole food market ;it is evident that the big retail businesses play a fundamental role for purchases. In fact, 58% purchases are made in large stores, followed by a 22% of the organic consumers of Pontine Province who prefer the specialized shop.

Consumers' willingness to pay for organic product

Many studies indicated that one major factor that considered to be the barrier to organic food consumption is its price (Nooripoor et al, 2008; McEachern & McClean,2002; McEachern&Willock J., 2004). Aryal et al, 2009 noted that approximately half of the consumers of their sample were willing to pay more for organic foods, the majority of them reaching levels of 6-20 percent.

In this paper, knowledge about products and their benefits (tab.2) influences the willingness to pay for the organic products; about 37% consumers (104 individual out of 280) perceives that the average price of organic product is higher compared to conventional ones but organic food has the value and benefits and that's why they are willing to pay more for the price. Respondents were asked to indicate if they are willing to pay a higher price for organic foods, and how much extra they are willing to pay if less than half, more than half of the conventional food price. The current average premium is about 30- 40%. Of the respondents only 9.8% are willing to pay more than 35-40 % of the conventional product price, 36.3% are willing to pay more than 20-25 % of the conventional product price and 50.6% are willing to pay only less than the price charged for conventional product. However, with regards to respondents have willingness to buy more of organic food if it is cost less in the future. Women were more likely than men to agree that they would purchase more organic foods if they were less expensive and more available.

A significant probability of future purchases of organic food product was indicated with their consumers with different type of employment ; in fact fifty percent of the buyers perceived that the price is higher but 33% of consumers from business category and professional category expressed that higher price doesn't matter if the product is really organic. (table 4)Various study sustain that consumers will give second priority to the price of the products and they always look for the quality organic food. They feel that the price of organic food becomes the cost of investment in "good health" (Aryal, 2009, Menon 2008, Sandalidou et.al, 2002; Geeroms et al, 2008).

TABLE 4: Mean values and Statistical analysis (anova and lsd multi-comparison between factors) of consumers' perception about the price of organic products for different categories.

Consumers' perception about the price										
	Type of occupation	Housewife a	Teachers a	Professionals a	Employees a	Business people a	2-WAY ANOVA results			
Level perception	significance*	34	36	37	35	40	Source	d. f.	Mean Sq.	Prob>F
Reasonable	a	48	44	35	45	31	Type of occupation	4	0.00	1
High	a	10	13	18	11	22	Level perception	3	1266.00	8.7e-07
Not Important	b	8	7	10	9	7	Residuals	12		
No Difference	c	34	36	37	35	40				
*different letters indicate significant differences for P<0.05										

The study findings further showed that despite of having higher price compared to conventional alternatives, many consumers continue to buy organic products. A analysis of variance (ANOVA) was used to assess the statistically significant differences between the Consumers' perception about the price and different occupation. A multi-comparison between factors' means was performed by a Least Significant Difference (LSD) test. For the Consumers' perception about the price of organic products results, the parameters presented statistically significant differences categories (p<0.05).

V. CONCLUSION

From the results, it can be concluded that perceived value significantly influenced the purchase intention of organic food products. The results showed some similarities with the results of previous research in which the perceived value is an important factor and become the deciding factor to the purchase of organic food products

A likely scenario for future demand is that the relative gap between the prices of organic and conventional food becomes smaller, organic products must be distributed more widely in domestic markets, and support for research and the conversion of organic production systems on the part of public authorities has enhanced. This work has shown that some groups of consumers have more positive attitude to organic products and they show an increased willingness to pay higher prices for these products. For this reason, marketing strategies for organic food products must be directed to those segments of consumers most appreciative of the positive attributes of organic food. Our findings are consistent with the results from other studies, which evidence the positive effect of health information on consumer expectations, perceptions (Roosen et al, 2007; Kozup et al, 2003) or intentions (Roe et al 1999; Annunziata et al, 2009). On the other hand, product information is one of the extrinsic factors that has been demonstrated to affect consumer choice

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