MNK Publication
International Journal of Latest Research in Science and Technology **ISSN (Online):2278-5299**
Volume 2, Issue 6: Page No.128-132 ,November-December 2013
http://www.mnkjournals.com/ijlrst.htm

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

[1]Sonia Attanasio, [1]Angela Carelli,[1]Lucio Cappelli, [1]Patrizia Papetti
1Economics Department, University of Cassino, Cassino Italy

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; infact, 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. Infact, 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; Makelaet & 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 date are is 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 all. (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		
Perception towards Organic	Male %	Female %	Mean %
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(2). 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)

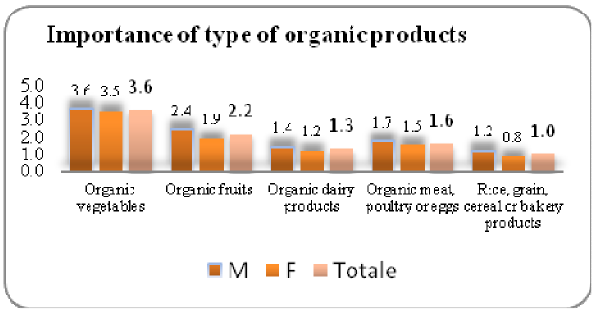

Fig.1: Importance of different types of organic products as perceived by respondents who have bought of organic

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 grou ps.

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.
(For the significance, different letters indicate significant differences for $p < 0.05$.)

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 e 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

REFERENCES

1. Ahmad S. N. B., Juhdi N. (2010) Organic Food: A study on demographic characteristics and factors influencing purchase intentions among consumers in Klang Valley, Malaysia. *International Journal of Business and Management* Vol. 5(2) 106-118
2. Aryal K. P., Chaudhary P,, Pandit S., Sharma G. (2009)Consumers' willingness to pay for organic products: a case from Kathmandu valley. *Journal of Agriculture and Environment* 10, 12-22
3. Annunziata A., Pascale P.(2009) Consumers' behaviours and attitudes toward healthy food products: The case of Organic and Functional foods. the 113th EAAE Seminar "A resilient European food industry and food chain in a challenging world", Chania, Crete, Greece, September 3 - 6,
4. Asadi A., Akbari M., Sharifzadeh A., Hashemi S. M. (2009) Analysis of Factors Affecting Agricultural Organic Products Diffusion Among Consumers: Perception of Extension Workers World. *Applied Sciences Journal* 6 (3), 331-338
5. Baker S., Thompson K. E., Engelken J. (2004). Mapping the values driving organic food choice-Germany vs. the UK. *European Journal of Marketing*, *38*(8), 995-1012
6. Batt, M. T., Hooker, N. H., Haab, T. C., Beaverson, J. (2007). Putting their money where their mouths are: Consumer willingness to pay for multi-ingredient processed organic food products. *Food Policy*, *32*, 145-159.
7. Bech-Larsen, T., Scholderer, J. (2007). Functional foods in Europe: Consumer research, market experiences and regulatory aspects. Trends in Food Science & Technology, 18, 231–234.
8. Bhatta, G.D., W. Doppler, K.B. KC, and A.Ranabhat, 2008. Potentials of Organic Agriculture in Nepal. In P. Chaudhary; K. Aryal and D. Tharu (ed.), Proceedings of International Workshop on Opportunities and Challenges of Organic Production and Marketing in South Asia, NPG,Kathmandu, Nepal, pp.34-46.
9. Bourn D., Prescott J. (2002) A comparison of the nutritional value, sensory qualities and food safety of organically and conventionally produced foods. Critical Reviews in *Food Science and Nutrition*, 42(1), 1-34.
10. Canavari, M., Bazzani, G. M., Spadoni, R., Regazzi, D. (2002). Food safety and organic fruit demand in Italy: A survey. *British Food Journal*, 104, 220-232.
11. Canavari M., Olson K. (2007). Organic Food: Consumers' Choices and Farmers' Opportunities, New York, Springer
12. Chen, M. F. (2007). Consumer attitudes and purchase intentions in relation to organic foods in Taiwan: Moderating effects of food-related personality traits. *Food Quality and Preference* 18, 1008 - 1021
13. Davies A., Tittering ton A.J., Cochrane C. (1995).Who buys organic food? A profile of the purchasers of organic in Northern Ireland. *British Food Journal* 97(10), 7-23.

14. Dean M., Arvola A., Vassallo M., Lähteenmäki L., Raats M. M., Saba A., Shepherd R. (2006). Comparison of elicitation methods for moral and affective beliefs in the theory of planned behaviour. *Appetite* 47, 244-252.
15. Devcich D. A., Pedersen I. K., Petrie K. J. (2007). You eat what you are: Modern health worries and the acceptance of natural and synthetic additives in functional foods. *Appetite* 48, 333-337.
16. Flick U. (2006). *An introduction to qualitative research* (3rd ed.). London: Sage
17. Fishbein M., Ajzen I., (1975). Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research. J. Wiley and Sons: New York, USA.
18. FiBl/IFOAM (Research Institute of organic agriculture/International federation of organic agricolture movements), *"The World of Organic Agriculture: Statistics and Emerging Trends 2012"*
19. Fotopoulos C., Krystallis A., Ness M. (2003). Wine produced by organic grapes in Greece: using means-end chains analysis to reveal organic buyers' purchasing motives in comparison with the non-buyers. *Food Quality and Preference* 14 (7), 549-566.
20. Geeroms N., Verbeke W., Van Kenhove P. (2008). Consumers' health-related motive orientations and ready meal consumption behaviour. *Appetite*, 51, 704-712.
21. Gregory N.G., (2000). Consumer concerns about food. *Outlook on Agriculture*, 29(4), 251-257
22. Kozup J. C., Creyer E.H., Burton, S. (2003) Making healthful food choices: the influence of health claims and nutrition information on consumers' evaluations of packaged food products and restaurant menu items. *Journal of Marketing* 67, 19-34.
23. Krissoff B. (1998). Emergence of U.S. organic agriculture - can we compete? *American Journal of Agricultural Economics*. 80(5), 1130-1133.
24. ISMEA (2012) Prodotti Biologici. Report
25. Lea E., Worsley, T. (2005). Australians' organic food beliefs, demographics and values. *British Food Journal*, 11 pp. 855-869.
26. Lockie S., Lyons K., Lawrence G., Mummery, K. (2002). Eating "green": motivations behind organic food consumption in Australia. *Sociologia Ruralis*. 42(1), 23-40.
27. Magistris T., Gracia A., (2008) "The decision to buy organic food products in Southern Italy", *British Food Journal* 110 (9) , 929 - 947
28. McEachern, M.G., Willock, J. (2004). Producers and consumers of organic meat: a focus on attitude and motivations. *British Food Journal* 7, 534-552
29. McEachern M.G., McClean, P. (2002). Organic purchasing motivations and attitudes: are they ethical?. *International Journal of Consumer Studies* 26(2) 85-92
30. Magnusson M.K., Arvola A., Koivisto Hursti U.-K., Aberg, L., Sjoden, P.O. (2001). Attitudes towards organic foods among Swedish consumers. *British Food Journal*. 103(3), 209-27.
31. Makela J., Niva, M. (2002). Changing views of healthy eating: Cultural acceptability of functional foods in Finland. Nordisk Sociolog kongress, Iceland: Reykjavic. *Food Composition and Analysis* 19, 84-86.
32. Menon M. K. (2009) Organic Agriculture and Market Potential in India-The World of Organic Agriculture. Statistics and Emerging Trends 2009. Willer, H. and Kilcher, L. (Eds)
33. Nooripoor M., Shahvali M., K. Zarafshani, 2008. Integration of Communication Media For Horticultural Sustainability:The Application of Multiple Criteria Decision Making (MCDM), *American-Eurasian J. Agric. Environ. Sci*. 3(1), 137-147.
34. Padel Susanne, Carolyn Foster. (2005). Exploring the gap between attitudes and behaviour: Understanding why consumers buy or do not buy organic food. *British Food Journal* 107 (8),606-625.
35. Roe B., Levy A. S., Derby B. M. (1999). The impact of health claims on consumer search and product evaluation outcomes: results from FDA experimental data. Journal of Public Policy & Marketing, 18, 89-105.
36. Roosen J., Marette S., Blanchemanche S., Verger P. (2007). The effect of product health information on liking and choice. *Food Quality and Preference* 18. 759-770.
37. Saba A., Messina, F. (2003). Attitudes towards organic foods and risk/benefit perception associated with pesticides. *Food Quality and Preference* 14, 637-645
38. Sandalidou, E.; Baourakis, G. & Siskos, Y. (2002). Customers' perspectives on the quality of organic olive oil in Greece. A satisfaction evaluation approach, *British Food Journal*, 104, (3/4/5), 391-406
39. Schifferstein H.N.J, Oude Ophuis P.A.M. (1998) Health-related determinants of organic food consumption in the Netherlands. *Food Quality and Preference* 9(3), 119-133
40. Suh B. W. (2008). A study on the relationships between TV programs related to health and diet and consumers' diet life: Focus on the age group in 20s and 30s. *Journal of Korean Food Marketing Association*, *25*(2), 29–48.
41. Tregear A., Dent J.B., McGregor M.J., (1994). The demand for organically grown produce. *British Food Journal* 96(4), 21-25.
42. Uusitalo L. (1990). Consumer preferences for environmental quality and other social goals. *Journal Consumer Policy* 13, 231-251
43. Urala N., Lahteenmaki L. (2006). Hedonic ratings and perceived healthiness in experimental functional food choices. *Appetite* 47, 302-314.
44. van Kleef E., van Trijp H. C. M., Luning, P. (2005). Functional foods: health claim product compatibility and the impact of health claim framing on consumer evaluation. *Appetite*, 44, 299-308.
45. Verbeke W. (2005) Consumer acceptance of functional foods: Sociodemographic, cognitive and attitudinal determinants. *Food Quality and Preference* 16, 45-57