

## Analysis of Consumer Preferences at Organic Food Purchase in Romania

Vladimír Vietoris<sup>1\*</sup>, Dagmar Kozelová<sup>2</sup>, Martin Mellen<sup>2</sup>, Marcela Chreneková<sup>3</sup>,  
Janko E. Potclan<sup>2</sup>, Martina Fikselová<sup>2</sup>, Peter Kopkáš<sup>4</sup>, Elena Horská<sup>5</sup>

<sup>1</sup>Department of Plant Storage and Processing, Faculty of Biotechnology and Food Science, Slovak University of Agriculture, 949 76 Nitra, Trieda A. Hlinku 2, 949 76 Nitra, Slovakia

<sup>2</sup>Department of Food Hygiene and Safety, Faculty of Biotechnology and Food Sciences, Slovak University of Agriculture, Tr. A. Hlinku 2, 949 76 Nitra, Slovakia

<sup>3</sup>Department of Regional Science and Rural Development, Faculty of European Studies and Regional Development, Slovak University of Agriculture, Tr. A. Hlinku 2, 949 76 Nitra, Slovakia

<sup>4</sup>Department of Economic Policy, Faculty of National Economy, University of Economics in Bratislava, Dolnozemska cesta 1, 852 35 Bratislava, Slovakia

<sup>5</sup>Department of Marketing, Faculty of Economics and Management, Slovak University of Agriculture, 949 76 Nitra, Trieda A. Hlinku 2, 949 76 Nitra, Slovakia

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The decision-making process of consumers buying organic food is affected by several factors. Because of organic agriculture in Romania is growing, the objective of this paper was to analyze consumer opinions and preferences concerning organic food products in Romania. The survey involved 350 respondents. The respondents were divided into two groups using the Hierarchical multiple factor analysis (HMFA). The strongest reason for buying organic food for Romanian respondents is health care, presented by 42% of respondents. Respondents prefer to buy organic foods directly from the producers, followed by supermarkets, specialized shops and pharmacies. The prevailing price of monthly purchase of organic food is 10 to 20€. The respondents are able to pay for organic food from 5 to 10% more than for conventional food.

### INTRODUCTION

The organic product market is growing globally. In recent years, consumers, producers as well as retailers have exhibited a growing tendency toward healthy, highly nutritious, functional, and, obviously, organic foods. Given that many European states have provided government grants for organic foods, these have become more easily accessible to consumers, both financially and in terms of the place where they can be procured. A field research conducted through the observational method reveals that an increasing number of Romanian retailers have included organic food in their assortment, both under the producer and their own brand [Pop & Dabija, 2013]. Most organic food available on the Romanian market is imported, as the number of local companies that produce these products is low. The study of Romanian Academy of Sciences estimates that sales of organic agricultural products and organic food in Romania amounts to about 2 million € per year, representing about 1% of the total market for agri-food commodities [Roman *et al.*, 2010]. European Commission analysis of the organic sector states that Romania

is among EU countries where the growth of the sector could be qualified as dynamic. The number of organic producers increased from 72 in the year 2000 to 2775 in 2008. Romania declared to provide further support to the improvement of quality in the organic sector.

Organic food will be processed minimally in the future. The specific taste and traditional regional specialties will be more appreciated [Rural Europe, 2009]. But biologically active substances in organic food are interesting for the consumer and food industry as well [Ivanišová *et al.*, 2013]. Important approach is health safety of organic products, *e.g.* pesticide residues were confirmed only at crops grown on conventional farms, at organic grape bunches no residues were confirmed [Turgut *et al.*, 2011].

The decision-making process of consumers buying organic food is influenced by several cultural, social, personal and psychological factors. Psychology of the sale is a key area of consumer behavior and consists of several factors. The psychological factors include perception, learning or knowledge, opinions and attitudes, as well as motivation. An integral part of these are thought processes that determine purchasing decisions. According to Dahl [2013], social influence, *i.e.* how others affect our emotions, opinions, or behavior, in consumption has

\* Corresponding Author: E-mail: [vavro24@gmail.com](mailto:vavro24@gmail.com) (V. Vietoris)



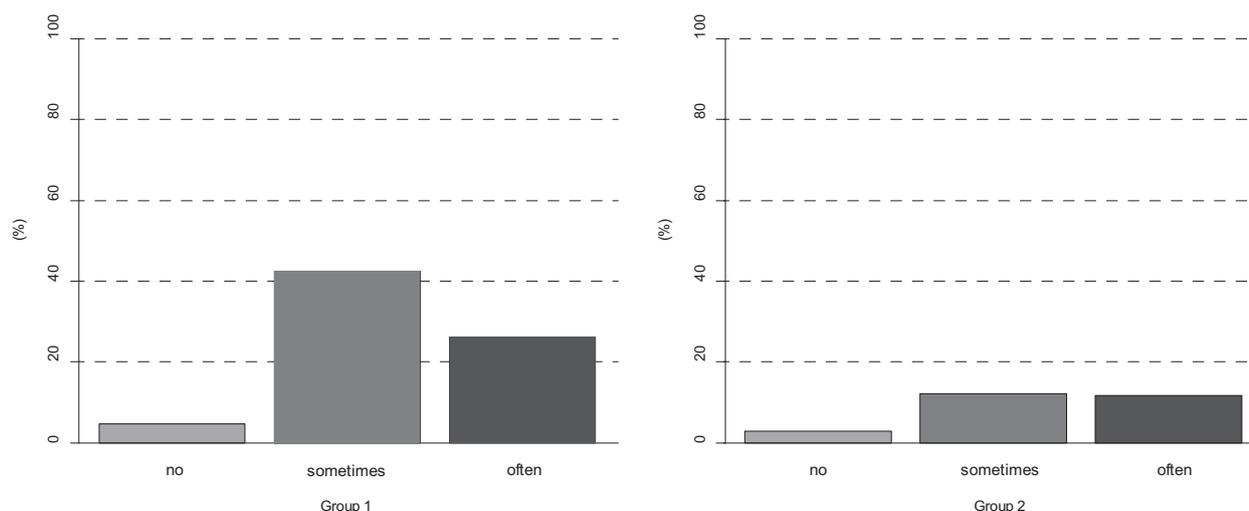


FIGURE 3. Respondent answers to the question: “Do you read the information on food labels?” (%).

a long and varied history in the fields of sociology, psychology and marketing. Important for the future will be application of Neuroscience techniques for analysis and clustering of customers and their perception of organic food [Berčík, 2013].

Organic agriculture in Romania is growing and consumer demands regarding organic food are increasing, therefore the objective of this paper was to analyze consumer opinions and preferences concerning organic food products in Romania.

## MATERIAL AND METHODS

Consumer opinions about purchase of organic foods, their preferences and shopping behavior information were obtained by using a questionnaire technique. The issues we had examined were selected psychological and socio-economic aspects of consumer behavior.

The survey was conducted in several cities in Romania. Data were obtained from November 2010 till June 2011. The sample consisted of 350 respondents, including 54% women and 46% men.

Respondent's age was 18 years and more. The group of 18–30 years represented 21% of the respondents, the group of 31–40 years was prevailing (35%), followed by respondents aged 41–50 years (25%), 51–60 years (11%) and the category of 61 and older (8%). Educational structure of respondents was as follows: higher education 28%, secondary education 53% and basic education 19% of respondents.

Hypothesis was based on idea: “There are two strict possible groups – organic users/eaters and non-eaters/users”. Agglomerative hierarchical clustering on the contingency tables derived from the dataset by the method of Agnes R (Agglomerative Nesting) has been used to highlight the structure -similarities in group responses [R Development Core Team, 2011].

## RESULTS AND DISCUSSION

According to TP Organics (the Technology Research Platform for Organic Food and Farming), people will eat healthier

and more balanced after 2025. Preferences will change in favor of organic food [Rural Europe, 2009]. Clarkson *et al.* [2013] ask if consumers are motivated to seek out experiences that enhance their appreciation within a product category—and if so, does their level of experiential expertise (or consumption knowledge) within a product category bias the types of experiences they value and pursue. These questions are central to his research, which explores the premise that consumers value the accrual of consumption knowledge as a means of enhancing their hedonic appreciation of future consumption experiences in a product category. The group of respondents was based on algorithms divided into two groups in order to describe better groups and higher polarization differences between groups of respondents. The HMFA (Hierarchical Multi-Factor Analysis) was chosen for this procedure that can categorize individual observations described by quantitative and qualitative data and then sort them. Figures 1 and 2 correlatively describe the characteristics of both groups calculated by HFMA. Comparison and description of each group is visualized by set of Figures 3–9).

When buying food, an important role is played by cognition. Therefore, we were interested in whether respondents read the information on food labels. We found that in both groups of respondents there prevailed casual reading of the information and to a lesser extent often reading. Five percent of respondents do not read the information on food labels (Figure 3). In western economies, the label has gained high recognition, but organic food still represents a small part of total food consumption, which raises questions about the label's efficacy. In particular, when brand equity is high (low), the organic label appears less (more) effective. However, regardless of the brand equity level, an organic label makes the environmentally friendly attribute salient, which has a positive impact on the perceived quality [Larceneux *et al.*, 2012].

The buyer decides whether to buy organic product or foodstuff, or not. Food choice is based primarily on knowledge and awareness of consumers about the product. Almost all Romanian respondents have already met the concept of organic food. Up to 86% of respondents said that organic food

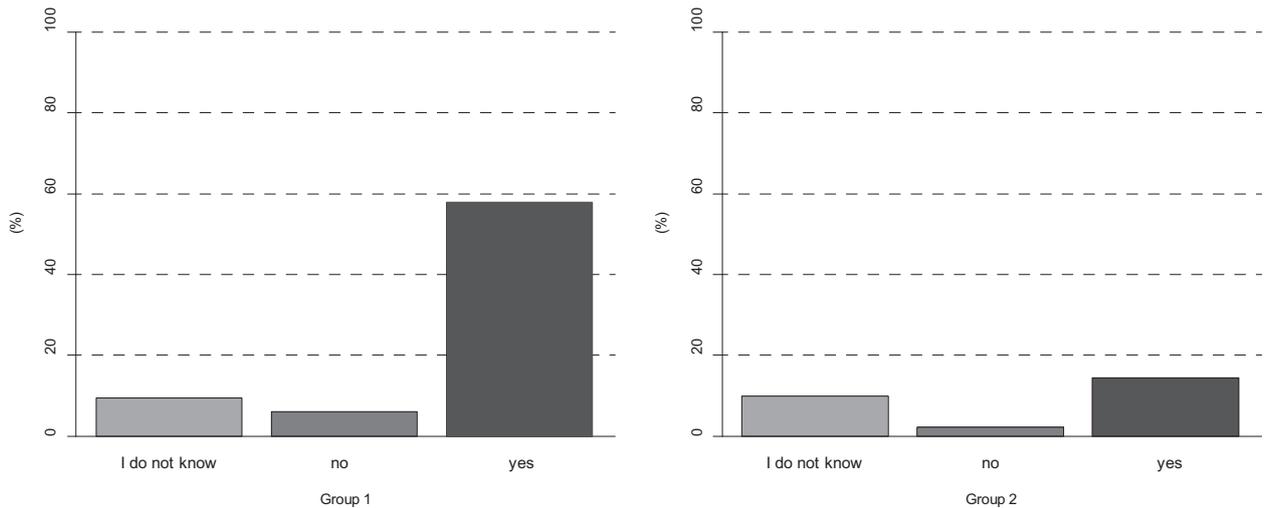


FIGURE 4. Respondent answers to the question: "Is organic food healthier than conventional food?" (%).

is inspected and certified food made from organic products and 14% of respondents believe that organic food is produced by conventional agriculture or food industry.

In Romania, Pop & Dabija [2013] found that health provides a primary consumption motive, even without proof that organic food is better for people's health. The strongest motive for buying organic food for Romanian respondents is also health care [Vega-Zamora *et al.* 2014]. This reason was presented by 42% of respondents. The second most important motive for 25% of respondents is their own health problems. The third reason is concern about the environment (16%) and the fourth is a vegetarian diet (15%). Two percent

of respondents buy organic products randomly. In the survey aimed at opinion and awareness of Slovak consumers on organic food, Kozelová *et al.* [2013] found that 42% of respondents trust in the organic more than in conventional food. The reason was health safety of products and healthcare.

Another psychological factor in the decision-making process on buying organic food is own experience and recommendations of acquaintances and friends. The argument that organic food is tastier and healthier than conventional food is shared by 77% of Romanian respondents, 7% of respondents disagree and 16% of respondents could not comment on the issue (Figure 4).

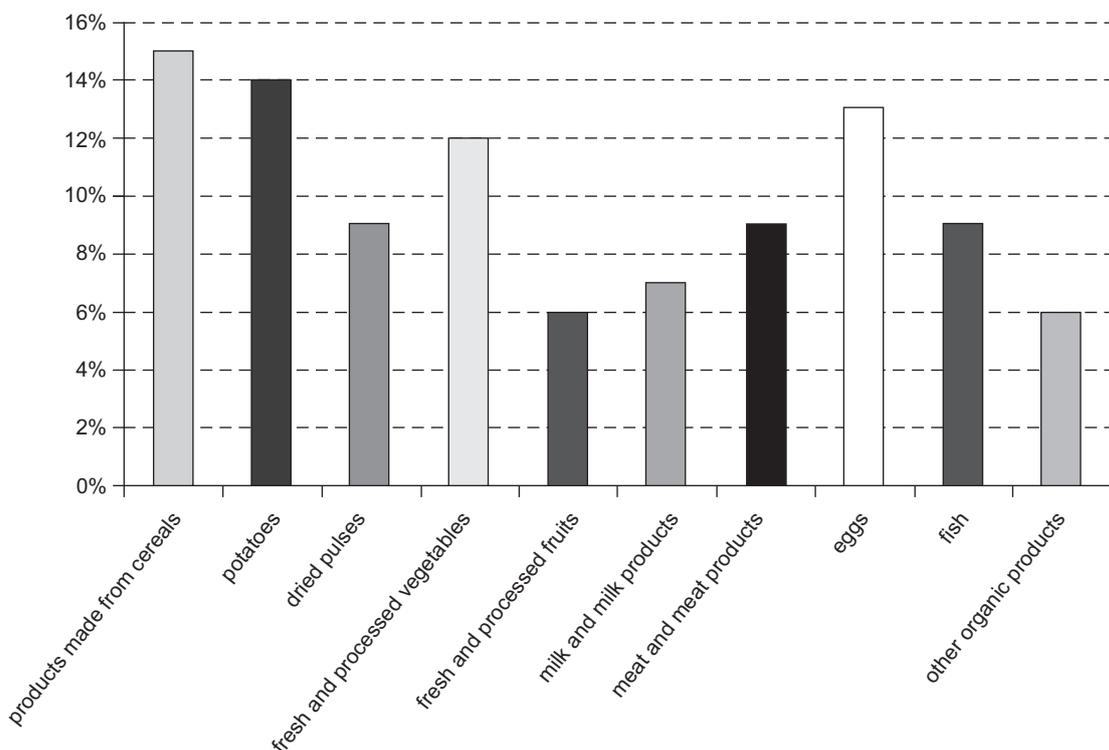


FIGURE 5. Structure of organic food purchased (multiple options).

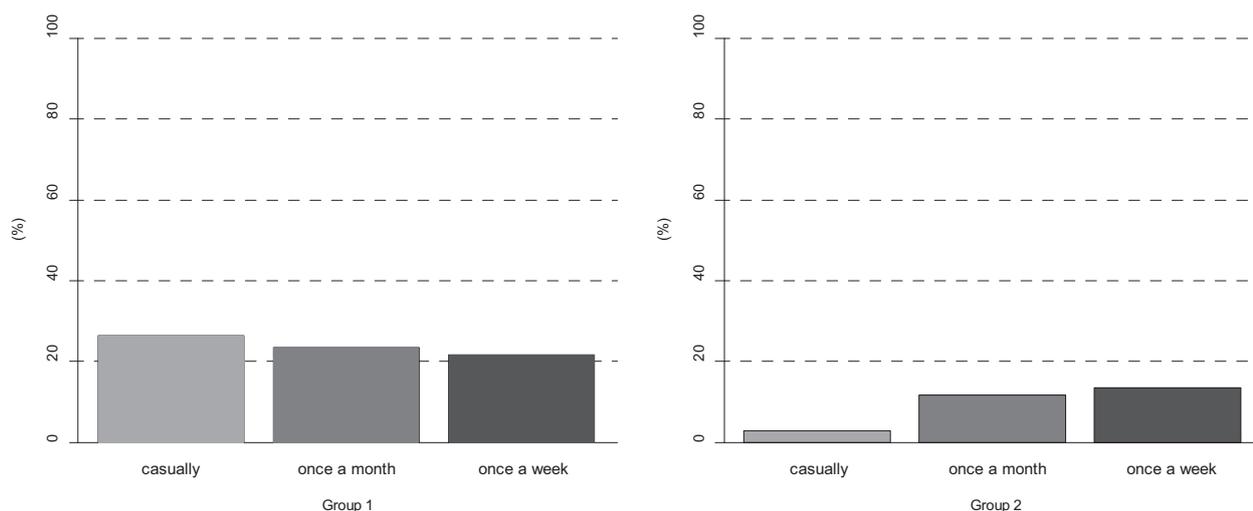


FIGURE 6. Frequency of purchasing organic foods (%).

Subjective knowledge is important factor in assessing the consumption of organic food. This fact is confirmed by Pieniak *et al.* [2010], who performed the multifactor analysis of the consumption of organic vegetables in Belgium.

The human nutrition and diet are affected by social factors. Direct or indirect impact on individual behavior have certain reference groups and family – eating habits, state of health of family members. Organic food is purchased by 27% of Romanian respondents. Among the assortment of goods respondents buy organic food in the following structure: 15% of products made from cereals such as grain, flour, bran, bread, pastry, porridge, pasta and flakes, 14% potatoes, 13% eggs, 12% of fresh and processed vegetables, 9% of organic fish, as well as 9% of pulses and 9% meat and meat products, 7% milk and milk products, 6% of fresh and processed fruits and only 6% of other organic products such as herbs and spices (Figure 5).

Up to 79% of respondents buy organic food from groups which are combined from: products made from cereals, eggs, fresh and processed vegetables, potatoes and dried pulses.

Figure 6 shows that in the first group of respondents, the frequency of buying organic food is evenly distributed. No significant differences are found between occasional, weekly and monthly shopping. In the second group, weekly and monthly shopping dominates.

Registered producers of organic food, organic products, developing green economy, must comply with strict conditions of production. In this kind of production, the management of every company should be well informed about the use of biotechnology in crop and livestock production. Sale of organic food directly from the manufacturer must comply with the conditions for the production, storage, processing and transportation of agricultural products and foodstuffs, set in legislation.

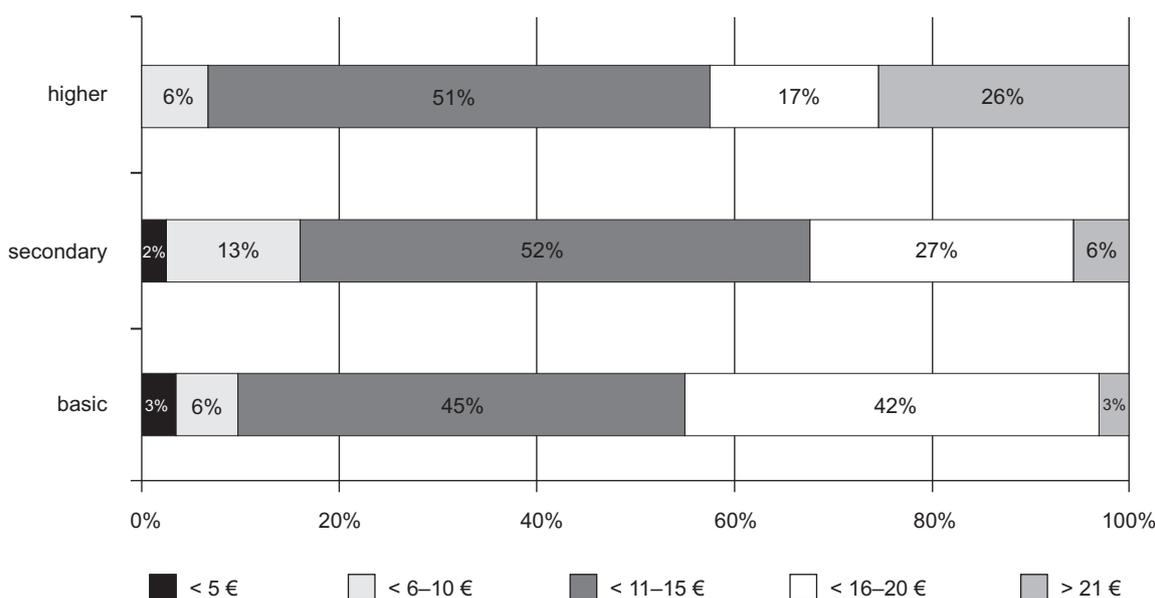


FIGURE 7. Monthly expenditure on the purchase of organic food in relation to education of respondents.

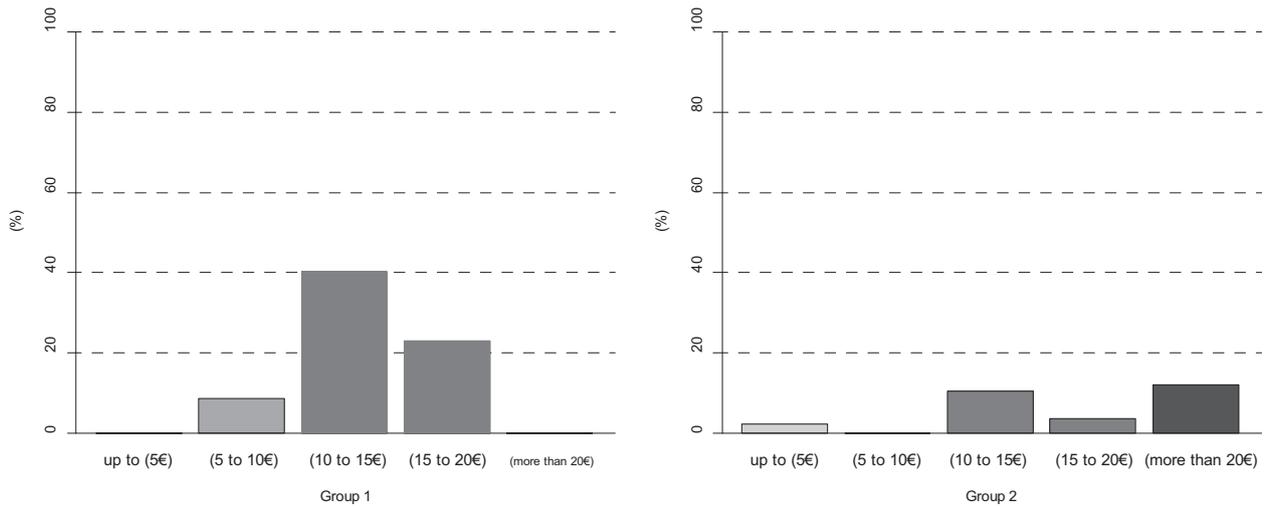


FIGURE 8. Respondent answers to the question: “How much do you spend to buy organic food per month?” (%).

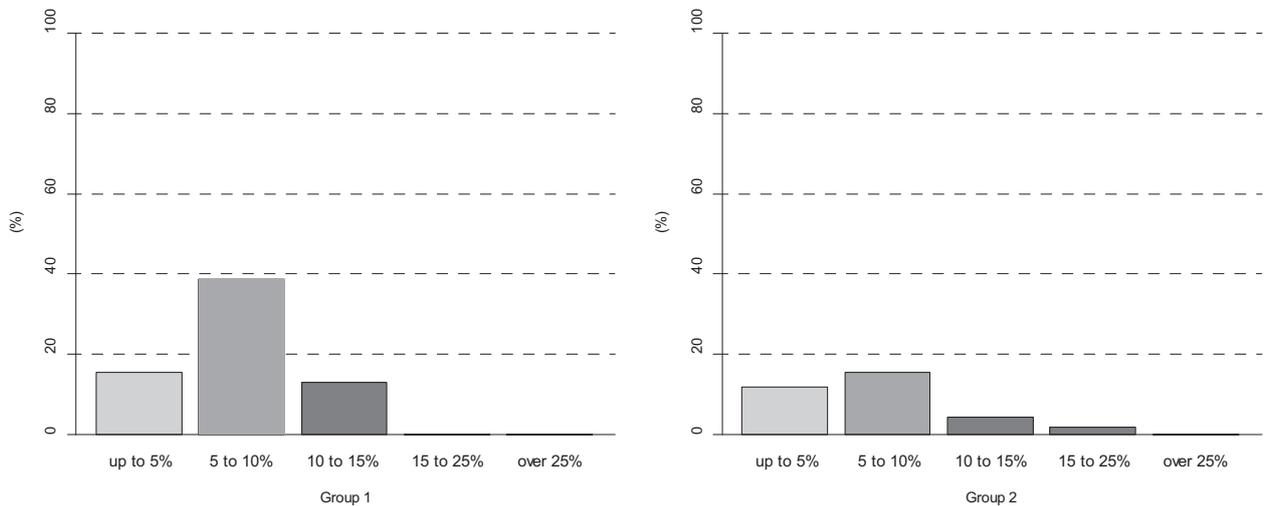


FIGURE 9. Respondent answers to the question: “How much are you willing to pay more for organic than for conventional foods?” (%).

At buying food, the place of purchase plays an important role. Romanian consumers (respondents) buying organic food prefer a purchase directly from producer (31%), followed by supermarket (25%), specialized stores (23%), pharmacy (20%) and elsewhere (1%). Consumers prefer organic beef directly from the butcher to meat packaged and labeled as organic [Corsi & Novelli, 2007]. Compared the preferred place to shop organic products in Italy is, in preference order: supermarket, mentioned by 44% of respondents, organic shop (35%) and local shops in fewer cases [Naspetti & Zanoli, 2002].

Personal factors such as age, personality, self-awareness, lifestyle, occupation and economic circumstances also affect consumer buying decisions.

Prevailing cost of monthly purchase of organic food is from 41 to 50 LEI (10 to 15€), with no correlation on education of respondents (Figure 7 and 8). From the whole group of respondents, 49% of them spent from 41 to 50 LEI (10 to 15€) and 26% of respondents from 61 to 80 LEI (15 to 20€) per month on buying organic food.

In the first group of respondents, aging 18 to 50 years, the opinion that organic food is healthier than the conventional one prevailed. This group is dominated by the monthly expenditure on buying organic food from 10 to 20€. The second group consists of respondents aged 50 years and more. Respondents of both groups are willing to pay for organic food from 5 to 10% more than for conventional foods (Figure 9).

Similar results were presented by Tranter *et al.* [2009] and Cook *et al.* [2009], where organic products are generally more expensive by 10 to 40% compared to similar conventionally-made products. In Poland, the acceptable price is higher by 10–20% [Kucinska *et al.*, 2006; Bakula *et al.*, 2012]. Study of Pop & Dabija [2013] in Romania showed that the retail chains carry a wide range of organic articles and the customers are sometimes willing to pay an extra price of 50 up to 100%.

Consumers would be willing to pay a higher price for organic products, especially for organic vegetables. Consumers would buy organic beef at prices significantly higher than for

conventional meat. Organic beef may thus gain significant market share. Limited consumption so far is justified by low offer on the market [Corsi & Novelli, 2007]. O'Donovan & McCharthy [2002] analyze the impact of higher prices on consumer decision-making about the purchase of organic meat, but Galletto *et al.* [2007] indicate uncertainties in quantifying costs. Receipts and expenditures of producers of agricultural products in relation to public budgets were analyzed by Bojňanský *et al.* [2012]. Share of agricultural sector in Romania's GDP in 2012 was 6%. The results show that market development is the least developed step and that there is a correlation between higher governmental engagement and more developed organic sector [Larsson *et al.*, 2013].

According to the European Commission analysis, despite the increasing acreage of organically grown crops, the share of total food household expenses is only 2% in the EU. Organic food expense per capita is only 0.1 € in Romania. More than 80% of the organic production of the EU is consumed in Germany, Great Britain, France and Italy, at an average annual increase of 18.1%, which occurred France from 2005 to 2009. Austria leads the offer of organic food in supermarkets [Agra Europe, 2010].

By HMFA analysis consumer's description follows. In the first group (larger by density) of respondents prevailing are respondents who read information occasionally, they consider organic food healthier compared to conventional. Mostly they purchase organic food occasionally and within cost range from 10 to 15 Euros per month. They are willing to pay more for organic food than for conventional foods predominantly by 5 to 10%.

In the second smaller group, respondents also prevail who read information on food labels, they consider organic food healthier, they buy organic foods weekly within cost range of more than 20 EUR. For organic food, they are willing to pay 5–10% more compared to conventional foods (see Figures 3,4,6,8,9). Group 2 looks more organic food oriented even in cost range spending, but description of both groups cannot be strictly determined (see Figure 1, intersection of group lines).

## CONCLUSION

The decision-making process of consumers, when buying organic food, is influenced by several factors. These include reasons to purchase organic food, product knowledge, attitudes towards organic food, experiences, health status of the household members, income of respondents, price of products, point of sale, *etc.* The Romanian market currently offers mostly imported organic products. It is assumed that the production of organic products and food in Romania will grow because the demand for organic food is high. It can be revealed the respondent's increased interest in the issues related to promoting health and a lifestyle in accordance with the principles of a balanced diet. It is advisable that the conclusions of the present study should be turned to good account by means of an active marketing policy so that an "organic diet mentality" may be developed among the Romanian customers.

In connection with the sale of organic products, and setting their prices we recommend to prepare appropriate legis-

lation for better conditions for small and medium enterprises, value added tax for organic agricultural products sold directly from the manufacturers should be lower compared to conventional foods. We expect that this will increase the marketability of organic products, producers' income and support employment in this sector.

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