

## **FACTORS AFFECTING CONSUMER BUYING PROCESS OF ORGANIC FOOD IN KRAKOW URBAN AREA**

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**Abstract.** Societies, particularly in highly developed countries, become more and more interested in the environment protection issues showing their high ecological awareness. One of the most popular ways of its manifestations among consumers is the purchase of organic food. Recognition of purchase reasons of this kind of food is key element for producers. Identification and understanding of determinants of buying process provides a source of competitive advantage and helps to succeed on the market. The research aim was to examine selected motives and criteria as factors affecting organic food buying process depending on the length period of its purchasing by consumers. Survey was conducted from March to June 2015 using PAPI method in shops offering organic food, localized in the urban area of Krakow. The study included 318 respondents who met the condition that they were organic food buyers for at least several months. The results obtained through analysis allowed to determine, the highest participation rate in the sample had the consumers purchasing organic products for several years. The most important purchase motives for organic products were health reasons and conviction that organic food is safe. The most significant criteria from the point of consumers view in the selection of organic products were the price as well as their labelling and aroma.

**Key words:** organic food, purchase motives, purchase criteria.

**JEL code:** D12, Q13.

### **Introduction**

Food is a permanent component of human development history. It is a means, which not only ensures human survival, but also enables its development (Jezewska-Zychowicz, 2007). For ages people believed, that food in itself is healthy because it supplies the organism with nutrients crucial for its proper functioning (Waszkiewicz-Robak, 2002). However, currently applied food manufacturing methods striving at continuous improvement of efficiency at simultaneous lowering production costs, raise doubts among some part of society concerning the quality of products manufactured in this way. These food products usually contain excessive amounts of nitrates, heavy metals, pesticides and other harmful substances. Therefore, they may cause allergies, weaken human immune system and lead to a more frequent cases of civilizational diseases (Misniakiewicz, Suwala, 2006).

This situation causes that societies, particularly in highly developed countries become increasingly more interested in the environment protection issues showing their high ecological awareness. The phenomena perceived on this ground are evident not only as concern for the natural environment (Rachocka, 2003). "Green consumption" is easily noticeable on food market,

where the change in consumer behaviours is characterized mainly by a greater interest in food originating from sustainable agriculture without agricultural chemicals application.

Organic system of food production, beside obvious benefits for its consumers, also positively affects the general society. It helps to maintain biodiversity and protect the natural environment but also sustain it for future generations (Tyburski, Zakowska-Biemans, 2007).

Recognition of consumer needs and preferences is particularly important for food producers. The knowledge about consumer behaviours and their determinants are the issues crucial for marketing also at organic food market. Identification and understanding purchasing reasons of organic food provides a source of competitive advantage and helps to succeed on the market.

The main aim of research was to examine selected motives and criteria as factors affecting organic food buying process depending of the length period of its purchasing by consumers.

### **Research methods**

Studies were conducted from March to June 2015 using PAPI method in shops offering organic food, localized in the urban area of Krakow

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(Malopolska province, Poland). The study included 318 respondents who met the condition that they were organic food buyers for at least several months. Women constituted about 67.3 % of the surveyed, whereas men 32.7 %. Young persons, under 25 prevailed in the studied sample constituting 34.9 %. The respondents in the 26-35 age group made up 25.4 %, aged 36-45 constituted 20.8 %, whereas those over 45 constituted 18.9 % of the studied sample. Two respondent groups were identified according to the education level, in which 47.5 % declared secondary education, whereas 2.5 % higher education. Four groups were distinguished on the basis of the economic factor, i.e. income per person in the respondent families. The income of 1000 PLN per household member was declared by 29.9 % of the respondents, 33.0 % declared the income between 1001 and 1500 PLN, 22 % in the range from 1501-2000 PLN and 15.1 % of the respondents stated their incomes above 2000 PLN.

Structure indicators and arithmetic mean were used in descriptive analysis of the results. Non-parametric chi-square test was applied for the analysis of relationships between the features measurable on the nominal scale, whereas the strength of correlation relationship was tested using V Cramer coefficient. ANOVA was applied for the comparison of mean estimates made on the rank scale by k- independent respondent groups, while the post-hoc Tukey test was applied to determine the statistically significant differences between mean estimates. The assumed significance level (p-value) for all analyses was 0.05.

## Research results and discussion

The respondents participating in the study were asked to indicate since when they were organic food buyers. The answers showed that 44.3 % of the surveyed declared buying organic products for several years, for over 21.3 % of the respondents the period was one year, whereas

the other studied persons (34.0 %) were purchasing these products for several months.

Verification of the obtained results by means of  $\chi^2$  test confirmed the existence of a weak relationship between the organic product buying period and the gender, age, education level and income per person in the respondents' households (Table 1). Considering the gender, a higher percentage of males than females declared the longest period of organic food buying. On the other hand, women more often than men declared buying organic products for over a year. The age also diversified the respondents due to the period of organic food buying. A pattern was observed, that the percentage of persons who were this food consumers for the longest period of time was growing with age. Moreover, the highest indicator of persons who were purchasing organic products for the shortest period was noted among the group below 25 years of age. Persons purchasing organic products for several months made up the highest percentage of the respondents under 25. Among the respondents with secondary education, persons buying organic products for several months made up the highest percentage, whereas in the group with higher education, those buying these products for several years. Considering the income level per person in the respondent households, the highest percentage of respondents who were buying this food for the longest period, was registered among those stating the income more than 2000 PLN.

The literature of the subject shows that purchases of organic food are determined by demographic and economic factors characterising the buyers. The category, which influences the perception and consumption of organic food is consumer gender. Studies conducted by Lea and Worsley (2005) indicate that women have more positive opinions about organic food than men. The well-established positive attitudes towards these products were reflected by the results obtained by Radman (2005). They confirm that a

higher percentage of females than males are consumers of organic food.

Table 1

**The period of buying organic products vs. demographic features of respondents**

Demographic features	$\chi^2$	df	Cramer's V coefficient	p-value
gender	13.235	2	0.204	0.001
age	27.899	6	0.209	0.000
educational level	19.971	2	0.251	0.000
income per person in household	37.157	6	0.241	0.000

**Source:** author's calculations based on author's research

Research conducted by Olivas and Bernabeu (2012) demonstrated that women and men may differ by the reasons why they buy organic food. Women are motivated for purchasing in the first place by healthy dietary habits, whereas men buy organic products mainly for social reasons.

Studies conducted by Arbinda et al. (2005) revealed that younger consumers are more inclined to buy organic food than older. Studies by Dimitri and Dettmann (2012) indicate that the level of education has a strong influence on potential organic food purchases.

Investigations conducted by Davies et al. (1995) in mid-nineties of the previous century revealed that a crucial factor affecting organic food purchases is consumer income. It was corroborated by the results obtained 10 years later by Arbindra et al. (2005) that the household income influences the potential purchase of organic food by consumers.

During the study the respondents assessed the motives for organic food purchasing using a 5-degree scale of importance, on which 1=completely unimportant factor, while 5=very important factor. It allowed ordering the analysed motives according to the hierarchy of their importance for the surveyed persons. According to the respondents, attention to health proved the most important reason for organic food buying ( $M=4.42$ ;  $SD=0.97$ ), then conviction that organic food is safe ( $M=4.00$ ;  $SD=1.02$ ) and that it has a high nutritional value ( $M=3.96$ ;

$SD=0.98$ ), and better taste ( $M=3.68$ ;  $SD=1.12$ ). The evaluation of concern for animal welfare received the lowest mean value ( $M=3.19$ ;  $SD=1.45$ ).

As reported by Rembialkowska (2002), organic food reveals more health, nutritional and sensory values in comparison with food manufactured in a traditional way. It contains definitely less nitrates, nitrites and pesticide residues but far more of vitamin C and other vitamins, total sugars, valuable protein and minerals. Moreover, organic products have greater taste and aromatic value, which is of great importance for consumers. According to Kozelova et al. (2011) organic, particularly unprocessed food (vegetables and fruit) contains more active substances at simultaneous lower concentrations of harmful substances in comparison with traditional food. These facts influence the consumer perception of organic food and are corroborated by the literature of the subject. Authors presented a hierarchy of factors influencing organic products purchases, showing that they are determined mainly by the factors connected with consumer health and nutrition. Further, the purchases are encouraged by the taste, food safety and environmental concerns (e.g. Bourn, Prescott 2002). Studies by Olech and Kubon (2015) demonstrated that consumers are convinced of organic products safety, because they are free of artificial additives, such as preservatives or dyes. Greening of life causes that consumers attach increasingly greater importance to the natural environment. The results obtained by Tsakiridou et al. (2006) allow for the conclusion that the most important factors, on which organic food consumption depends, beside the attention to health, comprise care for the environment. Kozelova et al. (2013) obtained similar results. Among the analysed reasons for organic food purchasing, care for the environment and landscape were the most important for consumers. Some research indicates that increases also consumer awareness

on ethical attributes of organic food, like e.g. animal welfare (Tsakiridou et al., 2006; Zander, Hamm, 2010).

However, in the first place consumers show attention to their own health, which has a direct influence on their organic food choices. Attention to health distinguishes this group from the rest of the consumers on food market (Tung et al. 2012). It was confirmed by numerous studies which demonstrated that the main stimulus for buying organic food are health reasons (e.g. Hutchins, Greenhalgh, 1997; Zanolli, Naspetti, 2002; Magnusson et al., 2003; Chen, 2009; Mondelaers et al., 2009).

ANOVA results (Table 2) revealed differences in the evaluation of the reason for purchase, i.e. conviction that organic food is safe, depending on the length of period when it was purchased. The respondents who have been buying organic food for several years are the most convinced about its safety, whereas the least sure are those who have been purchasing it for several months. Statistical differences were also demonstrated in the evaluation of a fundamental reason for organic food consumption, i.e. attention to health. In this case the highest mean evaluation of this motive was obtained among persons who have been organic food buyers for over a year, whereas the lowest among new purchasers.

Obtained results allow also stating the differences in the evaluation of another reason for organic food purchasing, i.e. concern for animal welfare. The persons who have been organic food purchasers for several years reveal the highest awareness of these issues, whereas those who have been buying it recently reveal the lowest. Considering the other reasons inclining the respondents to buy organic food, no statistically significant differences were noted among the persons buying this food.

Both while choosing organic food and conventional food, the consumers take into consideration various criteria, perceivable as preference for some products. Among the factors, under evaluation using a 5-degree scale of importance, on which 1=completely unimportant factor, while 5=very important factor, the most important proved: the price ( $M=3.72$ ;  $SD=1.14$ ), labelling and aroma (in both cases the mean evaluation was 3.20 and  $SD$  accordingly was 1.32 and 1.24). Next in line were such factors as: the country of product origin ( $M=3.19$ ;  $SD=1.35$ ), its appearance ( $M=3.05$ ;  $SD=1.21$ ) and producer ( $M=2.81$ ;  $SD=1.30$ ). The least important factor was seller's suggestion ( $M=1.12$ ;  $SD=1.06$ ).

Table 2

**Assessment of motives for organic products purchases depending on the period of their purchasing by the respondents**

Purchase motive	Period of purchasing organic food products						F	p-value
	several years		over a year		several months			
	M	SD	M	SD	M	SD		
conviction that organic food is safe	4.21a	0.86	3.96	0.98	3.73a	1.29	5.970	0.003
conviction that organic food has high nutritional value	4.08	0.95	3.97	0.86	3.79	1.20	2.462	0.087
conviction that organic food tastes better	3.77	1.20	3.46	1.10	3.69	1.16	1.767	0.173
attention to health	4.58a	0.67	4.79b	0.66	3.95a,b	1.37	19.843	0.000
concern for animal welfare	3.49a	1.50	3.34b	1.23	2.72a,b	1.58	8.617	0.000

M – mean, SD – standard deviation

a,b – differences between means are statistically significant at  $p < 0.05$

Source: author's calculations based on author's research

Organic products usually have higher prices than traditional foodstuffs. Price plays a crucial

role in the process of purchasing organic foods (Gottschalk, Leistner 2013) and since years is

regarded mainly as inhibiting the access to organic food market for a wide audience of consumers. It should be remembered that organic products are not mass produced, so aligning conventional and organic food prices cannot be expected. High prices are affected by a number of factors. Firstly, production process is time and labour consuming, because there is no possibility to use plant protection. According to Zakowska-Biemans (2011), the price level for organic food in Poland depends not only on higher costs of the food production, but is also connected with among others, poor development of national organic food processing and high margins for this food.

A crucial factor affecting the decisions about organic products' choice is sensory values, such as taste, aroma or appearance which distinguish them (Padel, Foster 2005).

An important element of organic products is their labelling. It results from the studies of

Matysik-Pejas and Zmuda (2010), that a majority of consumers recognize this kind of food on the basis of its certification body logo but are also guided by the graphic symbol of organic food. Yet, for some of the surveyed, the synonym associated with organic product origin was information about "healthy food", whereas it is usually an overused marketing slogan, which often has nothing to do with ecology. Results of conducted analysis (Table 3) indicate statistically significant differences between the evaluations made by the respondents, depending on the period of their organic food purchasing. It refers to, among others labelling of organic products on the basis of which the respondents identify them. The highest evaluation of labelling as a criterion of purchases was obtained from persons who were organic products buyers for the longest period. Building trust to one's offer by a producer will pay off by loyal customers looking for the products of specific producers.

Table 3

**Assessment of criteria of organic products purchase depending on the period of their purchasing by the respondents**

Purchase criteria	Period of purchasing organic food products						F	p-value
	several years		over a year		several months			
	M	SD	M	SD	M	SD		
labelling	3.41a	1.23	3.40b	1.01	2.78a,b	1.52	8.377	0.000
appearance	3.02	1.22	3.04	1.04	3.03	1.31	0.008	0.992
aroma	3.18	1.22	3.26	0.91	3.19	1.44	0.126	0.882
producer	3.12a	0.92	2.86b	1.25	2.47a,b	1.48	5.792	0.003
country of origin	3.37a	1.27	3.35b	1.03	2.75a,b	1.54	7.612	0.000
price	3.58	1.26	4.03	0.91	3.60	1.62	2.927	0.055
seller's suggestion	1.79a	0.92	1.81b	1.22	2.38a,b	0.95	8.449	0.000

M - mean, SD - standard deviation

a,b - differences between means are statistically significant at  $p < 0.05$

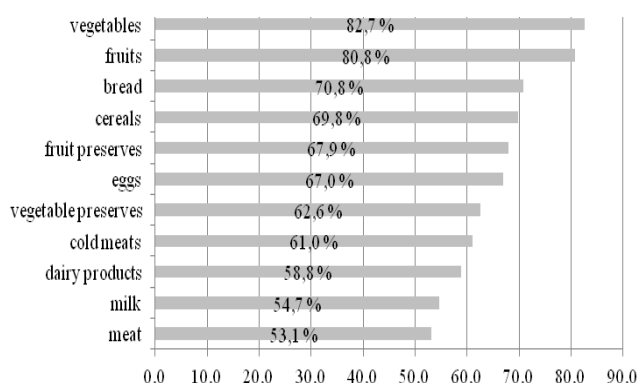
**Source: author's calculations based on author's research**

The analysis revealed statistically significant differences between the respondents concerning the evaluation of the factor influencing their organic products choice, i.e. the producer. This purchase criterion was estimated higher by the persons buying organic products for the longest time. The country of product origin proved equally important purchase criterion to the surveyed. The place of production plays an important role in food product choice;

particularly, unprocessed food should originate from the closest vicinity of the consumers. The last factor, for which differences in respondents' opinions were stated, is the fact whether they considered the seller's suggestions in their product choice. In this case, the respondents buying organic food for several months proved the most inclined to use this kind of assistance.

Among the organic food products offered by points of sales, vegetables and fruit obtained the

highest indicators declared by the respondents. Over 80 % of the surveyed buy them. The least popular products are milk and meat, purchased by over a half of the surveyed persons.



Source: author's calculations based on author's research

Fig. 1. Purchases of individual organic product groups declared by the respondents

Verification using  $\chi^2$  test confirmed the existence of weak relationship between the declared purchases of individual organic product groups and the period of these products buying by the respondents with reference to all analysed groups, except bread ( $\chi^2=0.5235$ ,  $df=2$ ,  $V=0.0406$ ,  $p>0.05$ ).

Research conducted in different countries (O'Donovan, McCarthy, 2002; Padel, Foster, 2005; Cerjak et al., 2010) shows fruit and vegetables to be the most frequently bought kind of organic products. Sometimes consumer experience with organic food ends just with these products.

The low indicator of the respondents concerning milk, meat and their products purchases is due to their poorer availability and insufficient offer of these products is points of sales in Poland (Luczka-Bakula, 2007). It should be also remembered that organic products, due to the absence of preservatives, have rather short shelf lives, which makes their turnover very difficult. Therefore, points of sales limit their assortment to the products which may be stored longer.

## Conclusions

Consumers are very important element of the market and further development of organic product market will depend just on them. Therefore, the circumstances which affect their behaviours are worth identifying.

- 1) Purchase and consumption of organic food are determined by many circumstances, including demographic-economic factors. While analysing the profile of organic food buyers, a prevalence of young women with higher education is visible, who declare an income per their household member below 1500 PLN.
- 2) For the respondents, consumption of organic food does not seem to be a question of fashion or temporary trend, because a majority formed a group of its permanent buyers. It is worth noticing, that the experience and interest in the environment protection issues become apparent in the evaluation of the importance of organic food purchase motives. It may be noticed, that as compared with the other surveyed, the persons only recently buying organic food have a lower awareness of some issues fundamental for ecology, such as the conviction that organic food is safe, that it has high nutritional value or concern for animal welfare. It denotes the need for the activities educating consumers and promoting the issues connected with obtaining food from organic production and processing methods.
- 3) In Poland, organic food market is still developing; therefore, the difference in price between the organic and traditional food may be higher than in the countries where the market has a stabile position. Prices for organic food products are the main barrier to their purchase; however, it may be noticed that it is the least important for the persons who have been purchasing it for the longest time. The fact, that consumers are sensitive to the originality of food, should be regarded as positive. During purchasing, it is important for

them to make sure if the products have appropriate labelling (e.g. organic food logo). In this case, it is apparent that the persons buying these products for the shortest period, evaluated this factor importance as the lowest. The country of product origin and producer loyalty have a considerable influence on the product choice, particularly for the

respondents buying organic products for years.

- 4) Consumers most frequently purchase organic vegetables and fruit. It is due to a wide availability of this offer and possibly also to a lower difference in prices of these products as compared to their traditional counterparts.

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