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Paweł Bryła,

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Organic food online shopping in Poland

Abstract

Purpose. The paper aims to analyse selected characteristics, attitudes and opinions of organic food e-consumers (online shoppers) in Poland.

Design/methodology/approach. A survey was conducted among 1000 inhabitants of Poland aged 15-65. The sample resembled the general population, regarding: age, sex, education and the size of the city of origin. 63 respondents reported buying organic food online. This segment was compared with the rest of the sample with the use of two-tailed t-tests. A logistic regression model was applied to identify the determinants of organic food online shopping in Poland.

Findings. In a logistic regression model, age, income, willingness to pay (WTP) a premium price for organic food, importance attached to product appearance and to quality signs turned out to be statistically significant determinants of online shopping behaviour for organic food in Poland. Higher income, importance attached to quality signs and higher WTP increase the likelihood of being an organic e-consumer, while higher age and importance attached to product appearance decrease it.

Research limitations/implications. First, some determinants of organic online shopping have been identified. Second, this study has provided some frameworks to analyse organic food selection motives, barriers to the development of the market, food authenticity assessment criteria, distribution channels, and product characteristics.

Practical implications. The findings may be useful for the industry due to the identification of the role of quality signs in online food purchases and of the importance of selected organic food consumption motives.

Originality/value. To the best of the author's knowledge, this is the first study of organic food online shopping in Poland.

Keywords: organic food; online shopping; distribution channels; consumer behaviour; e-commerce; Poland

Introduction

There is an abundance of literature on organic food consumers (e.g. Aschemann-Witzel and Zielke, 2017; Petrescu *et al.*, 2017; Anisimova, 2016; Bryła, 2016a; Lee, 2016; Lee and Hwang, 2016; Hemmerling *et al.*, 2016; Henryks *et al.*, 2014; Hsu and Chen, 2014; Kesse-Guyot *et al.*, 2013) and on online grocery shopping (e.g. Huyghe *et al.*, 2017; Mortimer *et al.*, 2016; Grzybowska-Brzezińska and Rudzewicz, 2016; Grzywińska-Rapca and Grzybowska-Brzezińska, 2016; Cyrek, 2013). However, there is a shortage of studies combining these two approaches. That is why this study examines the characteristics, attitudes and opinions of organic food online shoppers (e-consumers). This relatively small segment of the population is compared with a representative sample of 1000 Polish consumers. Organic e-consumers constitute 6.3% of the total sample. This paper aims to answer the following research questions: 1) Are organic online shoppers similar to the total sample regarding selected demographic and psychographic criteria?; 2) What is the importance of selected characteristics of food products in the group of organic online shoppers compared to other consumers?; 3) What is the role of quality signs in conventional and organic food purchases among organic online shoppers compared to other consumers?; 4) What are organic food authenticity assessment criteria among organic online shoppers compared to the total sample?; 5) What are the barriers to the development of the organic food market according to organic online shoppers compared to the total sample?; 6) What are organic food selection motives in

the group of organic online shoppers compared to the total sample?; 7) Which variables determine organic food online shopping?.

Material and methods

A survey was addressed to Polish consumers. The sample consisted of 1000 inhabitants of Poland aged 15-65. The sample was representative for the general population, regarding: age, sex, education and the size of the city of origin. The survey was carried out with the use of CAWI (Computer Assisted Web Interview) method by a specialised marketing research agency (ARC Rynek i Opinia) in its online panel (epanel.pl). The questionnaire contained 19 thematic questions and eight questions on respondent characteristics. Whenever a catalogue of options was proposed, the respondents had the possibility to supplement it with their own answer (semi-open questions) so as to ensure that the respondents' opinions are reflected to the highest degree in the research results. The questionnaire was designed in Polish due to the research setting. It is available from the author upon request.

Women constitute 50.1% of the study subjects, which is slightly less than in the general population of Poland (51.6% according to Central Statistical Office, 2013: 195). The age of the study subjects ranges from 15 to 65, with the mean of 40. The age structure of the sample corresponds very well with the general population of Poles belonging to this age interval (Central Statistical Office 2013: 196). As far as education level is concerned, 42.0% of the study subject have only completed primary school, 36.8% have secondary education, and 21.1% graduated from a higher education institution. These figures are also similar to the general population (Central Statistical Office 2013: 199). All the 16 Polish regions are represented in the sample. The sample also resembles the general population regarding the size of the city of origin (Central Statistical Office 2013: 204-207). The proportion between inhabitants of urban and rural areas is almost identical as in the general population (39.0 % of the study subjects live in the countryside compared to 39.4% of Poles). A more detailed comparison of the sample with the general population may be found in table 1 of a previous article from the same research project (Bryła, 2015).

This article focuses on those respondents who reported buying organic food online (63 people) and compares their characteristics, attitudes and opinions with the total sample. Descriptive statistics, cross-tabulation, t-tests and a logistic regression model are applied. The analyses are conducted in Microsoft Excel 2013 and Statistica 12.0.

Results

Women are slightly more often represented in the group of organic food e-consumers (54.0% compared to 50.1% in the total sample). Considerable differences were observed between organic food online shoppers and the total sample regarding the distribution by age and income (average monthly disposable income per household member): organic e-consumers tend to be younger and more affluent. Unsurprisingly, organic e-consumers have a higher share of organic products in total food consumption, and are characterised by a higher willingness to pay a higher price for organic food compared to conventional products (**table 1**).

Please insert table 1 about here

The biggest households (5 people or more) account for 27.0% of organic e-consumers, compared to the total sample, where they make up 21.6%. Meanwhile, families comprising of 3 people are less often represented in organic e-consumer group (19.0%) compared to 24.3% in the full sample. Organic online shoppers tend to live more frequently in small towns (up to 20 thousand inhabitants) (20.6% v. 12.3% in the total sample). The distribution by education

level is almost identical in the organic e-consumer group and in the total sample. This result is rather surprising, as it might be expected that higher educated consumers should buy organic food online more often. As far as professional activity is concerned, organic e-consumers are more common among students (who constitute 20.6% of the organic e-consumer group compared to 13.7% of the total sample), which may be related to their age characteristics. Blue-collar workers and professionally inactive persons tend to buy organic food online less frequently than their respective shares in the total sample would suggest (data for blue-collar workers: 25.4% v. 31.8%, and for the inactive: 3.2% v. 6.9%). This is consistent with the results for income, as these groups are likely to have lower than average income.

The respondents were asked to evaluate the importance of selected characteristics for their food purchase decisions (**table 2**). Although such factors as price, trust in the retailer, quality signs, and area of origin were more important for organic online shoppers than for the rest of the sample, these differences were not statistically significant at the level of $p < 0.05$. Product appearance and brand turned out to be less important for organic e-consumers, but only the difference regarding product appearance was statistically significant ($p = 0.04$).

Please insert table 2 about here

It is worth noting that quality signs play a more prominent role among organic e-consumers than in the entire sample. This applies to both organic and conventional food purchases. The t-tests are highly statistically significant for both categories of food ($p < 0.01$) (**table 3**).

Please insert table 3 about here

The most important organic food authenticity assessment criteria among organic e-consumers are: product quality, quality sign, natural taste, and label (in that order), while in the total sample the taste ranks first, followed by product quality, label, and quality sign (**table 4**).

Please insert table 4 about here

Organic online shoppers believe that the four most important barriers to the development of organic market are: high prices, low availability, insufficient consumer knowledge, and scepticism toward the systems of certification and labelling. In the total sample, price also ranks first, knowledge is second, availability third, and the fourth rank is taken by short expiry dates (**table 5**).

Please insert table 5 about here

The five most important organic food selection motives among organic e-consumers are: the ecological character of products (eco-friendliness), healthiness, quality assurance, taste, and safety. In the whole sample, healthiness ranks first, followed by the eco-friendliness, safety, taste, and quality assurance (**table 6**).

Please insert table 6 about here

The Duplication of Purchase methodology was developed to analyse multi-brand consumption patterns (Ehrenberg, 1988; Ehrenberg *et al.*, 2004). Recently, this method was applied by Dawes (2016). Following a Reviewer's suggestion, the author has decided to use

this method to analyse distribution channel behaviour of Polish consumers on the organic food market (**table 7**). In the calculations, the author has adopted the approach of Lees and Wright (2009). The numbers in the table under the columns A-J represent the proportion of users of the row distribution channel who also used the column distribution channel. For example look at the first entry under the A column, which says “26.7”. This means that out of the people who bought organic food in distribution channel B (in producer-owned shops), 26.7% also bought organic food in channel A (on the farm). Although, by definition, all organic e-consumers buy organic products online, Internet is not the only distribution channel of organic food in this group. Almost a half of organic e-consumers also buy organic food in specialised physical organic shops, a third of them – in markets and bazaars, and 1/5 purchase organic food directly on the farm, during producer fairs, in producer-owned shops, and in independent groceries. In the total sample, organic food is mainly purchased in specialised organic shops, in markets and bazaars, and in large distribution networks (hypermarkets and supermarkets). Although specialised organic shops rank first in the total sample, their share is lower than among organic e-consumers (38.8% v. 49.2%). Moreover, it is worth noting that only 14.3% of organic e-consumers also buy organic food in large distribution chains compared to 27.0% of the total sample. Finally, organic e-consumers tend to visit organic restaurants more often than respondents in the total sample (15.9% v. 5.4%). As mentioned above, in the total sample, Internet sales of organic food were indicated only by 6.3% of respondents, which was the 9th most popular distribution channel of organic food.

Please insert table 7 about here

In order to identify selected determinants of organic food online shopping, a logistic regression was conducted. The dependent variable was whether the respondent was buying organic food online. Since it is a binary variable, the logistic regression model seemed the most suitable. The analyses started with a wide range of independent variables related to the demographic and socio-economic characteristics as well as selected attitudes to food purchases. Step by step, those variables that were not statistically significant at the $p < 0.05$ level were eliminated. As a result of this procedure, a model that includes 5 independent variables was arrived at. The model is significant at the $p = 0.00001$ level. The goodness-of-fit of the logit model was verified with the Hosmer-Lemeshow test. Its value was 6.20 at $p = 0.62$, which means an acceptable goodness-of-fit. In **table 8**, the odds ratios, lower and upper limits of the 95% confidence interval, and statistical significance for these determinants are provided. Being younger and having income above median increases the chance of organic food online shopping. Unsurprisingly, those respondents who are willing to pay a higher price for organic food compared to conventional products are more likely to be organic food e-consumers. Furthermore, those consumers who attach more importance to product appearance are less likely to buy organic food in the Internet. Finally, those who declare a bigger role of quality signs in their organic food purchases are characterised by a higher probability of buying organic food online.

Please insert table 8 about here

Discussion

According to the results, organic e-consumers tend to be younger and more affluent than the total population. In the author’s opinion, the characteristics of organic e-consumers are related to 1) – organic consumption - consuming organic food only, organic and non-organic, or non-organic (conventional) only; 2) online shopping - buying online only, online and offline, or

offline only. Therefore, both streams of literature need to be examined. An examination of a dataset of 44,000 American households indicated that education has a strong effect on the likelihood of buying organic products, and that the impact of marital status, income, and access to organic are consistent across models (Dimitri and Dettmann, 2012). In China, certified organic food purchase is associated with demographic variables, such as income, education, age, gender, presence of young children, household size, living in developed cities and overseas experience (McCarthy *et al.*, 2016). The Nutrinet-Santé cohort study among 54,311 consumers revealed that regular organic product buyers, who constituted 14% of the sample, were more highly educated and physically active than other clusters as well as had a lower probability of being overweight or obese (Kesse-Guyot *et al.*, 2013). In Serbia, those who prefer organic food the most are predominantly female, somewhat more mature, with the highest proportion of employed and tend to be married and have children. They strongly value the importance of diet for health, a number of them have experience with a disease of a close person, which is believed that could be prevented by proper diet, but they do the least sports (Grubor and Djokic, 2016). Polish consumers with convenience and price orientation in their food choices are less inclined to buy organic products while consumers open to novelties and willing to try new foods more often declare to buy organic products (Żakowska-Biemans, 2011). A survey in a representative sample of 1000 Polish consumers demonstrated that there are relatively more organic food buyers among women, older respondents, better educated people, and rural inhabitants (Bryła, 2016a). Purchasers of food online tend to be young, well-educated and in a good financial situation (Grzybowska-Brzezińska and Rudzewicz, 2016).

The results of this study confirm the key role of quality signs in organic online shopping. There is a strong correlation between the perception of European quality signs and the attitude toward organic food as well as the self-reported willingness to pay a higher price for organic products compared to conventional food (Bryła, 2017). It is worth noting that organic food processors have a completely different opinion about the authenticity assessment criteria (Bryła, 2013) than organic food consumers in general and e-consumers in particular, as the findings demonstrate. The organic processors believe that consumer knowledge, product appearance, label, and packaging (in that order) are decisive in this process. Bryła (2015) discussed the concept of authenticity in relation to origin food products. Trust, serving as the antecedent of attitudes, significantly mediates the relationships between revealing information, perceived knowledge, and organic purchase intentions (Teng and Wang, 2015). Attitudes toward trust in the organic label, relational embeddedness in a channel, and attitudes toward organic foods have a positive impact on consumer purchase intentions (Liang, 2016).

Price is the most important barrier to the development of the organic food market both in the total sample and among online shoppers only. This finding is in line with the results of a survey conducted by Konieczny and Dziekan (2016) in one of Polish regions. Dmowski (2014) examined factors influencing the purchasing decisions on the market of organic teas offered online. The development of this market is constrained by high prices and insufficient information about the authenticity of the product. Marian *et al.* (2014) showed that a high price is a disadvantage for generating repeat purchase of organic food products. Although organic products generate higher repeat purchase than conventional products overall, a high price leads to less repeat purchase of organic products than a low or a medium price in all product categories, whereas the situation is the reverse for conventional food products. Swiss consumers are reluctant to buy organic food with high price premiums and they prefer domestic products over important ones (Götze *et al.*, 2016). In Germany, the most important reasons for not purchasing organic products among regular organic food consumers were price, insufficient availability, and the quality of the product (Buder *et al.*, 2014). However, another study showed that the respondents were willing to pay on average 53% above store prices, and in 67% of the cases, respondents bought a product even though the store price was

higher than the willingness-to-pay they indicated upon entering the store (Rödiger *et al.*, 2016). Croatian consumers are willing to pay a premium of 42% for organic apples and 59% for organic tomatoes. On top of that, WTP increases by 16-20% for environmental claims and 12% for health claims (Cagalj *et al.*, 2016). In Norway, changes in perceptions of barriers towards the purchase of organic food were observed between 2013 and 2000 (Vittersø and Tangeland, 2015). Such factors as trust in the labelling system and the quality of organic food perceptions had become more negative.

The principal motives of organic food choice among the e-consumers include: the ecological character of products (eco-friendliness), healthiness, quality assurance, taste, and safety. This finding is in line with a study of Kareklas *et al.* (2014), which revealed that egoistic (e.g., personal health) and altruistic (e.g., environmental) considerations simultaneously predict consumers' organic attitudes and purchase intentions. According to Polish organic food processors, their competitive advantage depends to the largest extent on product healthfulness, brand, reputation, and taste (Bryła, 2013). A survey among 3436 Polish consumers indicated that they paid attention to health issues to the greatest extent while selecting organic food (Wojciechowska-Solis and Soroka, 2017). The analysis of data from 13,074 German consumers indicates that altruistic motives are the major factors affecting consumer choice and organic food purchasing behaviour, while socio-demographic variables seem less important (Padilla Bravo *et al.*, 2013). Another German study demonstrated that organic food consumption is influenced by an overall holistic healthy lifestyle including a healthy diet and sport (Goetzke *et al.*, 2014). Consumers' perceptions of nutritional content, ecological welfare, and price attributes have strong effects on utilitarian and hedonic attitudes toward buying organic food, while perceptions of the sensory appeal strongly influence hedonic attitudes (Lee and Yun, 2015). Results from a demographically representative sample completed by an online survey in Australia ($N = 1011$) reveal statistically significant effects of healthism, hedonism, and trust on organic food consumer purchase intentions (Anisimova, 2016). In a qualitative study in Australia, the relationship between food and the environment was rarely considered by consumers, but a joined concept of healthy and environmentally friendly foods was an acceptable idea (Hoek *et al.*, 2017). In the US, organic products are perceived more favourably on a number of measures (including nutrition, safety, brand attitude, and brand trust) than conventional products, but this organic 'halo' effect does not extend to expected taste and likelihood of purchase, and retailers are a crucial factor that moderates the evaluation (Ellison *et al.*, 2016). Chinese consumers expect organic food to be more expensive and of a higher general quality compared to conventional food, but there are no significantly higher health or taste inferences for organic products (Loebnitz and Aschemann-Witzel, 2016). A survey among 753 readers of Taiwanese organic food distributors' newsletters has demonstrated that attitudes toward purchasing organic food online have the greatest influence on purchase intentions. Significant differences were observed depending on food-related lifestyles: traditional, uninvolved, and enthusiastic food shoppers (Liang, 2014). Gaspar *et al.* (2016) demonstrated a perceived applicability effect, with more habitual (non-organic) than non-habitual (organic) food products chosen in a high perceived applicability (familiar) than in a low perceived applicability (new) context. According to a survey conducted in 10 European countries, the impact of food-related lifestyle on sustainability choices depends on the country (Thøgersen, 2017). Two factors affect consumers' expectations toward organic food: naturalness and additional sustainability aspects, such as resource saving (Von Meyer-Höfer *et al.*, 2015). Organic food consumption is driven by an individual attitude in shaping buying intention, followed by subjective norms and perceived behavioural control (Scalco *et al.*, 2017). The product-specific attitude, sensory appeal and health orientation have a significant positive influence on individuals' organic food consumption (Chekima *et al.*, 2017). In a survey among 458 city inhabitants in Poland,

the key motives of online food purchases included: convenience, wide assortment, saving time, access to unique products, and low prices (Grzywińska-Rapca and Grzybowska-Brzezińska, 2016).

The current findings indicate that organic e-consumers use other distribution channels apart from the Internet to purchase organic products, in particular specialist physical shops and markets. This pattern of multichannel purchases of organic food creates an opportunity for possible synergies and complementarities between the online and offline channels (see e.g. Bryła, 2016b), but at the same time may be a source of conflicts. In the minds of consumers, the advantages of online grocery shopping include convenience, product range and price, whereas the disadvantages concern the risk of receiving inferior quality groceries and the loss of the recreational aspect of grocery shopping (Ramus and Nielsen, 2005). With the onset of online food sales, many previous quality signalling techniques have become less effective (Ernst and Hooker, 2006). The success factors for food e-commerce involve efficiency of navigation, accuracy in content and supplied information (Bodini and Zanolli, 2011). A quality website for the distribution of organic products reduces the factors that inhibit organic product consumption (Mozas-Moral *et al.*, 2016). Online shopping, in the grocery context at least, seems to primarily reflect a desire for time efficiency on the part of the shopper. In that regard, online shopping seems very similar to in-store shopping (Anesbury *et al.*, 2016). A growing number of consumers buy food products online due to time savings and access to a very wide assortment of products that are often priced competitively (Gębski *et al.*, 2017). The offer of online premium products significantly affects consumers' delivery logistics expectations (De Kervenoael *et al.*, 2016). Online sales for a retailer come disproportionately from its own in-store customer base (Dawes and Nenycz-Thiel, 2014). With an increase in online grocery shopping experience, multi-channel shoppers' focus shifts from a comparison within a chain across channels to a comparison across chains within the online channel, resulting in an increasing importance of online assortment attractiveness and online loyalty when choosing an online store (Melis *et al.*, 2015). While variables at the personal level affect the adoption of the online channel, consumer motivations should be analysed at the household level (Van Droogenbroeck and Van Hove, 2017).

Conclusion

To the best of the author's knowledge, this is the first study of organic food online shopping in Poland. Organic e-consumers are driven by quality signs to a larger extent than the rest of the sample both in their organic and conventional food purchases. Among organic e-consumers, organic food authenticity is evaluated primarily with the use of the following criteria: product quality, quality signs, taste, and label. In the opinion of organic online shoppers, the crucial barriers to the development of organic market include primarily high prices, low availability, insufficient consumer knowledge and scepticism toward the systems of certification and labelling. The most important organic food selection motives among the online shoppers are: eco-friendliness, healthfulness, quality assurance, taste, and safety. Almost a half of organic e-consumers also buy organic food in specialised physical shops and a third of them in markets and bazaars. In a logistic regression model, age, income, willingness to pay a premium price for organic food, importance attached to product appearance and to quality signs turned out to be statistically significant determinants of online shopping behaviour for organic food in Poland. Higher income, importance attached to quality signs and higher WTP increase the likelihood of being an organic e-consumer, while higher age and importance attached to product appearance decrease it.

There are numerous implications of the current findings for theory and practice. First, some determinants of organic online shopping have been identified. Second, this study has provided some frameworks to analyse organic food selection motives, barriers to the

development of the organic market, food authenticity assessment criteria, distribution channels, and product characteristics. Third, the findings may be useful for the industry due to the identification of the role of quality signs in online food purchases and of the importance of selected organic food consumption motives. The top motives: eco-friendliness, healthiness, quality assurance, taste, and safety may be emphasised in the marketing communication of companies specialising in organic food manufacturing and retailing.

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Biography:

Pawel Bryła is an associate professor at the Department of International Marketing and Retailing, Faculty of International and Political Studies, University of Lodz, Poland. His research interests include origin and organic food marketing as well as the role of health claims in food marketing and consumption. He has published 3 monographs in the field of food marketing and over 60 articles in leading national and international journals, including *Appetite*, *British Food Journal*, *Quality Assurance and Safety of Crops & Foods*, *Problemy Ekorozwoju*, *Academy of Management Learning and Education*.

Table 1. A comparison of organic e-consumers and the total sample regarding: age, income, share of organic products in total food purchases, and willingness to pay

Measure	Age (years)		Income (PLN)		Organic (%)		WTP (%)	
	OEC	TS	OEC	TS	OEC	TS	OEC	TS
Mean	34.65	39.22	1705.2	1450.3	34.762	27.738	23.397	17.355
Standard Deviation	13.75	13.77	906.9	993.9	25.840	21.401	23.548	16.199
Minimum	16	15	300	100	1	1	0	0
1st quartile	24	27	1000	800	10	10	8.5	5
Median	30	39	1500	1200	30	20	15	10
3rd quartile	45.5	50	2500	2000	55	40	30	20
Maximum	64	65	4000	9000	90	100	100	100

Notes: OEC – organic e-consumers (63 respondents), TS – total sample (1000 respondents), WTP - willingness to pay

Table 2. A comparison of organic e-consumers with the rest of the sample regarding the importance of selected characteristics of food products

Importance of the following characteristics	Mean		t	p
	OEC	Other		
Price	4.43	4.36	-0.70	0.48
Retailer trust	4.02	3.92	-0.79	0.43
Quality signs	3.97	3.88	-0.78	0.44
Product appearance	3.81	4.05	2.05	0.04
Area of origin	3.63	3.54	-0.72	0.47
Brand	3.38	3.51	1.07	0.29

Notes: OEC – organic e-consumers (63 respondents), Other – the rest of the sample (937 respondents); 1-5 scale

Table 3. A comparison of organic e-consumers with the rest of the sample regarding the role of quality signs in conventional and organic food purchases

Role of quality signs	Mean		t	p
	OEC	Other		
Organic food	3.60	3.18	-2.90	0.004
Conventional food	3.56	3.08	-3.43	0.0006

Notes: as in table 2

Table 4. Organic food authenticity assessment criteria

Criteria	Organic e-consumers		Total sample	
	Rank	%	Rank	%
Product quality	1	38.1	2	39.6
Quality sign	2	34.9	4	25.7
Natural taste	3-4	31.7	1	40.7
Label	3-4	31.7	3	29.0
Retailer	5-6	27.0	5	24.8
Knowledge	5-6	27.0	8	22.0
Appearance	7	22.2	7	22.1
Merchandising	8	19.0	6	24.6
Packaging	9-11	14.3	9	18.2
Scarcity	9-11	14.3	12	10.3
Tourism	9-11	14.3	13	5.9
Brand name	12	9.5	10	12.7
Region	13	6.3	11	10.7
Other	x	0	14	1.2

Note: the sum in each column may exceed 100%, because the consumers were requested to provide 3 criteria each

Table 5. Barriers to the development of the market of organic products

Barriers	Organic e-consumers		Total sample	
	Rank	%	Rank	%
Price	1	47.6	1	63.1
Availability	2	44.4	3	33.2
Knowledge	3	34.9	2	35.3
Scepticism	4	25.4	6	21.0
Substitutes	5	23.8	7-8	20.0
Merchandising	6	22.2	5	26.5
Marketing	7	20.6	7-8	20.0
Appearance	8	19.0	10	12.6
Mistakes	9	17.5	9	15.8
Expiry date	10	15.9	4	29.8
Taste	11	14.3	11	9.4
Other	12	1.6	12	0.8

Note: as in table 4

Table 6. Organic food selection motives

Motives	Organic e-consumers		Total sample	
	Rank	%	Rank	%
Ecological	1	39.7	2	46.9
Healthiness	2	33.3	1	50.6
Quality assurance	3	31.7	5	29.4
Taste	4	30.2	4	30.0
Safety	5	28.6	3	30.4
Vitamins	6-7	27.0	6	26.1
Uniqueness	6-7	27.0	14	13.2
Traditional recipe	8	23.8	8	21.3
Price	9-10	20.6	9	17.8
Producer brand	9-10	20.6	13	14.2
Fashion	11	19.0	7	24.7
Smell	12-14	17.5	11	14.6
Pleasure	12-14	17.5	12	14.3
Recommendation	12-14	17.5	18	11.1
Proximity	15-16	14.3	16	12.5
Retailer	15-16	14.3	21	9.7
Traceability	17-18	12.7	15	12.7
Animal welfare	17-18	12.7	20	10.0
Expiry date	19	11.1	19	10.7
Advertising	20	9.5	17	12.0
Loyalty	21-22	7.9	24	5.4
Nostalgia	21-22	7.9	25	2.8
Local producers	23	4.8	22	7.2
Curiosity	24-25	3.2	10	16.6
Regional	24-25	3.2	23	6.9
Other	x	0	26	0.7

Note: the sum in each column may exceed 100%, because the consumers were requested to provide 5 characteristics each

Table 7. Duplication of purchases between organic food distribution channels (%)

Channels	Total	A	B	C	D	E	F	G	H	I	J
A. On the farm	20.5		21.5	49.8	29.8	19.0	49.3	14.6	19.0	5.4	5.9
B. Producer-owned shops	16.5	26.7		39.4	35.2	19.4	52.7	20.6	27.3	7.3	7.3
C. Markets, bazaars	30.1	33.9	21.6		30.2	24.9	42.2	16.3	27.6	7.6	7.0
D. Fairs	20.5	29.8	28.3	44.4		35.1	49.8	15.1	19.0	6.3	5.9
E. Festivals	14.1	27.7	22.7	53.2	51.1		41.1	11.3	14.9	8.5	4.3
F. Specialised organic shops	38.8	26.0	22.4	32.7	26.3	14.9		14.2	23.5	5.2	8.0
G. Independent groceries	12.7	23.6	26.8	38.6	24.4	12.6	43.3		25.2	11.0	9.4
H. Large distribution networks	27.0	14.4	16.7	30.7	14.4	7.8	33.7	11.9		5.6	3.3
I. Restaurants	5.4	20.4	22.2	42.6	24.1	22.2	37.0	25.9	27.8		18.5
J. Internet	6.3	19.0	19.0	33.3	19.0	9.5	49.2	19.0	14.3	15.9	
Mean	19.2	24.6	22.4	40.5	28.3	18.4	44.3	16.6	22.1	8.1	7.7

Note: Total – the proportion of respondents declaring using a given distribution channel for organic food purchases

Table 8. Selected determinants of organic food online shopping (a logistic regression model)

Variables	Value	OR	95% CL	p
Age (years)	per unit increment	0.97	0.95-0.99	0.0054
Income (a)	1: if income is over the median 0: otherwise	2.20	1.27-3.83	0.0051
WTP (%)	per unit increment	1.01	1.00-1.03	0.0412
Product appearance (b)	per unit increment	0.73	0.55-0.97	0.0309
Quality signs (b)	per unit increment	1.38	1.06-1.81	0.0187

Notes: N=950 (because income data were unavailable for 50 respondents); OR – odds ratio; CL – confidence level; p – statistical significance level; a - dichotomous variable: below and above median; b - 1-5 scale; WTP - willingness to pay a higher price for organic food compared to conventional food