

LOCALLY PRODUCED ORGANIC FOOD: CONSUMER PREFERENCES

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Abstract

Local and organic food production is often linked to geographical identity that drives consumers to buy products due to their intangible attributes such as protection of the environment, support of local communities, and preservation of traditions. The primary objective of this paper was to find out if the Romanian consumers preferred a closer location of organic food production. Research results were based on a random survey, with a sample of 424 people from Romania. Seven variables related to consumer preferences and habits were analyzed through descriptive statistics and by Mann Whitney, Wilcoxon, Kruskal Wallis tests, and Spearman's rank-order correlation coefficient. Three location situations were taken under analysis: local *vs.* other national locations; national *vs.* other EU locations; and EU *vs.* the rest of the world. The results revealed that Romanian consumers were prone to local organic food sources, as long as 65% of them preferred locally produced foods over other national sources. A closer location was also more attractive in the other two tested situations, as follows: 77% of the sample preferred foods from Romania to those from other EU countries and 62% preferred European products to those from the rest of the world. The paper concluded that the promotion of the concept of a closer location could be an unexplored opportunity for those interested in the Romanian market.

Keywords: organic food, local product, consumer preference, Romania.

JEL Classification: D120, M31.

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Introduction

Local origin of agro-food products has become an important issue for production and consumption processes alike. Production and consumption are both economic and cultural phenomena – often linked to the geographical identity – that drive consumers to buy products not only for their immediate use, but also for their intangible attributes (e.g., environmental protection, support of local communities, and preservation of traditions). Ethnocentrism is also known to influence buying behavior (Jiménez-Guerrero et al., 2014). Globalization rises to what Whatmore and Thorne (1997) describe as an “alternative geography of food”. The global market might disassociate food from its social, historical, and geographical context (Sánchez Hernández, 2009) and, under these circumstances, notions of place of origin and local are re-emerging as expressions of geographic identity (Feagan, 2007). As a reaction, labels that inform consumers about certain characteristics of foodstuff (i.e., protected designation of origin, protected geographical indication, traditional specialties guaranteed, organic label, or fair trade) aim to protect historical and cultural associations with a geographical area or other sustainable practices. These approaches are often used to defend the local component of food production (Watts et al., 2005; Winter, 2003; Dinu, 2008) and to respond to the needs of those consumers who try to avoid highly processed foods and who are in search of quality food and sustainable solutions.

For several decades already, benefits of decentralized social and economic organizations for protecting local environments and economies from the negative impacts of globalization were stressed out (Seyfang, 2007; Jacobs, 1984), proposing what it is known today as the “new localism” (Filkin et al., 2000). Undeniable, “local” has a geographic connotation, but there is no consensus on a definition in terms of distance between production and consumption. Within this analysis, authors see “local food” as being based on market arrangements that include direct-to-consumer arrangements (e.g., local farmers’ markets) (Martinez, 2010). Therefore, besides geographic proximity of producer and consumer, local food encompasses social and supply chain characteristics (Martinez, 2010). The concept of local food can include references to who produces the food (e.g., certain skills of producer) or to a traditional method of food production (Thompson et al., 2008). This is why products labeled with Protected Designation of Origin (PDO) or with Protected Geographical Indication (PGI) can be considered as local foods, but “local products” are not reduced to the characteristics of these labels. Mutual exchange and trust are seen as important characteristics of local food (Sage, 2003). Consequently, in this research, the concept of “local food” can include foods with PDO and PGI (in this way products being placed in a defined geographical area) and foods which have not been certified but which are produced in the vicinity place of consumption.

Consumers get to valorize the food products they buy and consume through the inputs of local specificity borne by that product such as preservation of traditions, support of local ingredients use, and of community skills. In this context, the present study aims to cast light on the opportunity of promoting locally produced food as a way of refashioning cultural identity and supporting sustainable practices. The paper also supports the importance of scrutinizing the case of Romania as a geographical area in order to understand consumer preferences for locally produced organic food.

Starting from the assumption that consumption is a decisive triggering and stimulating factor of the economic activity, the paper has as primary objective to find out if locally produced organic food is preferred by Romanian consumers. Additionally, secondary

objectives of the paper are to determine the level of self-estimated consumption of organic food (recent past and future), and to estimate the premium price that consumers are willing to pay for organic food. These objectives were set in order to embed the issue of locally produced organic food into a broader context of organic food consumer behavior.

The investigation of consumer preferences for locally produced organic food represents an original contribution of the paper, which extends the literature by examining how consumer's preferences for locally produced organic food may represent a factor to enhance sustainable local agricultural production. At the same time, the paper contributes to scholarly literature by offering a complex pattern of analysis on the food location issue based on three levels – national, European and global – which can be easily applied to any product category or region.

The paper is structured on the following lines. The next chapter includes the review of the literature and addresses three aspects: the relevance of studying consumer behavior of local organic food, the meaning of the concept of locally produced food and the importance of organic food. Another chapter describes the research methodology, where the investigated variables and analysis methods are presented. The section dedicated to the results and discussions on the selected variables is structured on two coordinates. The first one includes consumer preferences and habits related to local food, and the second relates to the frequency of consumption of and the willingness to pay for organic food. Conclusions chapter summarizes results and their practical relevance.

1. Review of the scientific literature

An increasing number of producers and consumers which are dissatisfied with large-scale food production, processing and distribution systems are looking for an alternative for restoring local food markets (Stagl, 2002). In the book *The Nation's Diapers and the Emperor's Clothes*, Vintilă Mihăilescu (2013) remarks that "local product" label has the significance of added value for the buyer, because, as the author says, it reminds of the natural taste, of the childhood flavours, which are deeply embedded in the collective unconscious.

Taking into account the considerable similarities between organic and conventional food in terms of packaging, transport and shelf life, the promotion of organic farming is not sufficient for sustainable development. Therefore, local organic food can be a solution in this direction (Seyfang, 2006; Stagl 2002) According to authors' best knowledge, this is the first study to focus on consumer preferences for locally produced organic food in Romania. Previous studies investigated preference for locally produced conventional food, a trade-off between local and organic characteristics of food (Hempel and Hamm, 2016), and local character of the feed used to obtain local animal products (Wägeli et al., 2016). Cholette et al. (2013) tested preference for various combinations between price, origin, and presence/absence of an ecological indicator, including local character and organic attribute. Denver and Jensen (2014) focused on both location and organic features for apples. In the present paper authors focus on locally produced organic food, within the north-western development region of Romania, which is one of the eight country's regional divisions.

Consumer behavior, local food and organic food are the three main aspects that have been reflected in the literature review.

• **Consumer behavior:** This study focuses on the consumer, who is considered an important participant in the market mechanism, because he is the bearer of demand, which, in turn, defines consumption as a distinct moment of social life. This consumption is governed by both routine decision factors and important factors such as prices, availability of products, or consumer interest in health. Other motivations can also play a key role, such as preference for a close-to-market location and environmental concerns. In order to capture a complex picture of the behavior mentioned above, the following variables have been taken under scrutiny in the present study from the perspective of consumers' contribution to sustainable development: the location of organic food production in the form of preferences for a certain type of localization and recent consumption habits (related to location); frequency of recent and future consumption; and willingness to pay (WTP) for organic food. In research and practice, local food production has often been suggested to be in line with a sustainable consumption pattern due to a series of economic, social and environmental reasons (Seyfang, 2006). In a survey where British respondents were asked why they were buying local organic food (Seyfang, 2006), the most common reason was that organic food was considered safer and more nutritious. The second most common reason was environment protection (e.g., in relation to packaging waste, fewer fertilizers, shorter transport distances); a third purchasing reason was the desire to support the local economy and the community. An exploratory study on young Romanian consumers showed that their most important motivations to buy organic food were safety, good price-quality ratio and high nutritional value (Voinea et al., 2015). Other studies suggested that organic food was consumed out of interest to follow a healthy diet and to have a healthy lifestyle (Rakic and Rakic, 2015; Istudor et al., 2010). Finnish people have associated freshness, short transport, contribution to the local economy, and viability with local food production (Roininen et al., 2006). In a study by Dransfield et al. (2005), based on a sample of Danish, French, Swedish and British consumers, it was shown that almost 90% of them preferred organic pork originating from their country of origin over an imported product. There are also studies that highlighted the lack of preference for organic food from their country of origin, for example, Chinese consumers were willing to pay more for Australian beef than for the one from national sources (Ortega et al., 2016).

The long-term success of agro-ecological systems depends not only on science and practice, but also on developing community awareness and preparedness, businesses, and policy support that can ensure economic sustainability (DeLonge et al., 2016). Knowledge, beliefs, values, and norms shape consumer behavior and motivation to be or not to be consumers of specific foods (Feldmann and Hamm, 2015).

• **Locally produced food:** Although there is no generally accepted definition of “local food”, most authors include common features, such as distance, product freshness, relationship with small farmers, preservation of traditions (Dunne et al., 2010; Ostrom, 2006), being placed within a political boundary, or having a temporal meaning (from farm to fork in one day) (Adams and Salois, 2010). Thus, Starr (2010) considers local food as the one “purchased directly from small farms, eaten seasonally, and exchanged in a context of community and ecological education”. In some cases, only the reference to the administrative area (such as a county) or to an unspecific distance (under 50 miles/80 km) gives the attribute of being locally produced (Morris and Buller, 2003). Feldmann and Hamm (2015) highlight different understandings of local food, based on an extensive review: distance (the most frequently mentioned feature) of less than 100 miles (160 km), being homegrown and produced by friends or family who live in the proximity of

consumption place. Giovannucci et al. (2010) draw attention that local food should also embed: better flavor, food safety, improved nutrition, reduced transportation and processing, and a response against feelings of alienation from the land.

Geographical proximity, attached to local food, is the source of relevant benefits that are, in fact, the ones that are sought for and valued by consumers, such as environmental protection, support for local communities, which implies economic prosperity. To discover the preference for the proximity in production, to cover a large part of the possible understandings of “locally produced”, and to integrate various levels of localization from the geographical-administrative perspective, in our study three origins or types of food locations were taken under analysis: (a) local vs. other national, (b) national vs. other EU countries, and (c) EU countries vs. the rest of the world.

- **Organic food:** The population growth has directly influenced the development of production and food processing sectors, being under increasing pressure to adapt to market requirements related to social fairness, environmental protection, human health, or animal welfare, as they were mirrored in various researches (Makatouni, 2002; Zanolli and Naspetti, 2002). What is necessary in addition to market demands, it is a wide-ranging economic and cultural transformation of the way of life, now global in scope, which is “locked in” to consumption growth (Smart, 2010). This cultural and economic shift of the consumption pattern, visible especially in the developed countries, is moving forward from the “ordinary” consumerism to the “green” consumerism (consumerism with the meaning of excessive consumption). Through this change, on the one hand, consumers reduce their environmental pressures by switching to products with lower negative environmental impact, but, on the other hand, they do not contribute to environmental protection by reducing over-consumption, a behavior that it proves to be more difficult to change. However, the word “organic” has many meanings, due to diversity of aspects related to organic food production and consumption processes (Hughner et al., 2007; Dinu, 2012), including environmental protection. In this context, organic food and organic agriculture can be considered as a spearhead for transition toward more sustainable production and consumption in the food sector (Petrescu et al., 2013; Vittersø and Tangeland, 2015).

In Romania, organic farming has become a very attractive option, for investors and consumers alike, due to country specific features: large agricultural surface area of about 14.7 million hectares; favorable environmental conditions, such as climatic and pedological ones; decreased industrial pollution; existence of local varieties and traditional agricultural activities; and a large share of rural population. According to the most recent Eurostat data, at EU level, the increase in organic area between 2012 and 2016 was 18.7%. Croatia and Bulgaria recorded growth in the total organic area of over 100%, while other countries, among which Romania, reported a downward trend: Greece (-25.9%), Poland (-18.1%), Romania (-21.5%) and the United Kingdom (-16.9%) (Eurostat, 2017). Worldwide, 1.2% of the agricultural land is organic and the highest shares of organic agricultural land are in Oceania (with 6.5%) and in Europe (with 2.7% and EU with 6.7%) (Willer et al., 2018).

2. Research methodology

The results of the present research are based on a random survey that used a sample of 424 respondents, from the north-western development region of Romania. The sample was selected as it follows. In each of the six counties of studied region, three localities were

randomly chosen (from the list of all localities), and in each of these, 8 random starting points were established on the map. Starting from these points, an interview was requested at every seventh house or block of flats until the completion of the established sample size. The apartment number and the respondent within the household were chosen at random; it was requested that the age of the respondent was at least 18 years old. The number of localities and interviewees was influenced by budgetary and time constraints (however, the threshold of 384 people recommended for a 5% error and a 95% confidence interval was planned to be reached). Interviews took place during weekends to increase the chances of finding the majority of family members at home. The average acceptance rate of the interview was 7%. Data were collected using a structured questionnaires applied face-to-face by survey operators which assisted the subjects when they answered the questions. The entire research process, from elaboration and implementation of questionnaire to data analysis, was organized and supervised by the authors. The sample structure was by gender, as it resulted from sample selection, was 41% men and 59% women, and by income level was 13.7% with an income equal or below 500 RON, 41.7% between 501-1000 RON, 30% between 1001-2000 RON, 8% between 2001-3000 RON, 3.8% between 3001-4000 RON, and 2.8% above 4000 RON (the exchange rate was 1 Euro = 4.5 RON). According to the living environment, 54% of interviews were taken in urban areas and 46% in rural areas. By age, interviewees belonged to the following categories: 6% between 18-25 years of age, 18% between 26-35 years, 16% between 36-45 years, 23% between 46-60 years and 27% were over 60 years. As far as education is concerned, 24% of the sample had higher education and 76% completed high school or had less education. The economic and demographic characteristics of studied region make it an attractive option for the organic sector. Thus, the region has the third-largest population (13%; 2016 data), the third-largest monthly income per person (2015 data), second largest yearly expenditure level per person (2015 data), and the second-lowest relative at-risk-of-poverty rate (percentage of poor people in the entire population; 2015 data) among the eight Romanian NUTS (Nomenclature of Territorial Units for Statistics) regions (Institutul National de Statistica, 2017).

Only stated preferences and declared habits were investigated and a definition of organic food was provided at the beginning of the questionnaire to avoid misunderstanding and differences in its interpretation among respondents. In-depth interviews prior to the survey clearly indicated that consumers perceived that two distinct categories of organic food existed on the market, certified and non-certified organic products, which were included in the questionnaire. The present study investigated organic food in general, but not a specific type of organic products such as apples, dairy, beef, or others (Denver and Jensen, 2014; Petrescu et al., 2013; Krystallis et al., 2006). This study relies on the idea that consumers' perception of organic foods often differs from what a law defines as "organic". Therefore, a correct understanding of the market imposes the analysis of consumers' perception. Thus, while, according to EU legislation, for a product to be classified as "organic", it is mandatory to bear an organic label, for consumers in Romania, this certification step (and, implicitly, the existence of the organic label) is not a *sine qua non* criterion for considering the food as organic and they usually trust their own evaluation.

The term "organic" covers in this study two product categories, derived directly from Romanian consumers' perceptions. It refers both to (i) certified organic products (with organic label) and to (ii) non-certified products (without organic label) that are considered to fulfill the attributes of organic food. The latter does not always bear objectively the

organic features and usually originate from small subsistence family farms. In Romania, this perception is supported by the reality of the existence of non-certified organic foods on the market and of a socio-economic reality where consumers still have strong connections to the family rural production system, as a consequence of a large rural population and of the predominance of small-size (less than 5 hectares) family farms.

Certified and non-certified agro-food products are investigated separately to have a more accurate and complex understanding of consumer behavior, because various studies reported mixed meaning of “organic” concept in consumers’ minds (Hughner et al., 2007). Such a distinction presents a novelty to the conceptual approach in relation to organic food in other countries. For example in Spain, consumers assimilated to organic products whatever proceeded directly from the garden and was commercialized without artificial additives (Ureña et al., 2008) and in the Great Britain it was often observed an equivalency between organic and “free-range” products (Harper and Makatouni, 2002).

The variables investigated in the questionnaire are presented in figure no. 1.

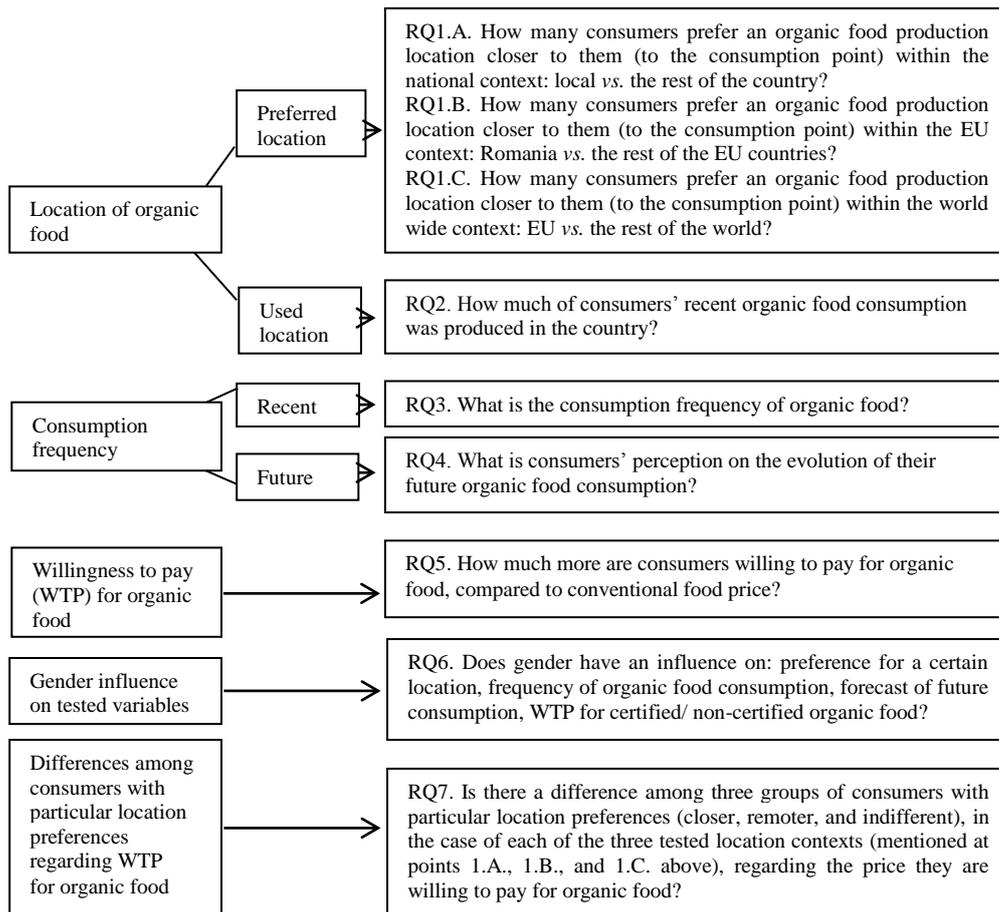


Figure no. 1: Variables and research questions (RQ) used in the study

The research questions focused on the origin of agro-food production location, to see which was preferred by Romanian consumers.

The survey data were analyzed in Excel and SPSS. The Mann-Whitney U test was applied to compare differences between two independent groups and the Kruskal-Wallis H test among more than two independent groups when the dependent variable was either ordinal or continuous but not normally distributed. The Wilcoxon Signed Ranks test was applied to analyze the difference in the median of a dependent variable between two related groups and the Spearman’s Rank-Order Correlation coefficient was applied to investigate the strength and direction of association that existed between two pairs of variables measured on at least an ordinal scale. The level of statistical significance was set at $p < 0.05$.

3. Results and discussion

The main issues considered in the research were consumer preferences and habits related to locally produced organic food and also consumption frequency and willingness to pay for organic food.

- **Consumer preferences and habits related to locally produced organic food:** The first question of the questionnaire was a filter one aimed at selecting only the consumers of organic food – according to their self-perception – and all persons responded with “yes” (“Have you consumed organic food during the last 12 months?”). In this context where all respondents declared that they consumed certified or non-certified organic products, the whole sample was composed of self-perceived consumers of organic food. However, this does not necessarily mean that these respondents are, objectively, consumers of organic food, by the legal definition of it. In this study, “organic food consumers” term refers to self-perception, which includes the two mentioned categories of consumers: (i) those relying on certification and label, and (ii) those using their own criteria and judgment. Respondents who consume non-certified organic food might eat, in fact, foods that do not comply with the organic legal requirements and are only perceived as such.

Respondents declared a clear preference for the locally produced food of closest location, which was obvious in all three alternatives, and casted light on an existing premise for the use of local food production location as driver for sustainability (table no. 1).

Table no. 1: Preferences regarding location of the organic food production at (a) national, (b) EU, and (c) world levels (percentages of total sample)

(a) Comparison between national levels		
Local	Other regions in the country (Romania)	Indifferent
65%	7%	28%
(b) Comparison between EU levels		
Romania	Other EU countries	Indifferent
77%	5%	18%
(c) Comparison between world levels		
EU	The rest of the world	Indifferent
62%	2%	36%

The fact that 65% of consumers preferred local products to those from other parts of Romania and that 77% of them preferred Romanian products vs. other EU countries, indicated that a

competitive advantage for local and national food producers could be promoted (advertised on the package/label, on the shelves, etc.). The influence of education on the preference for a specific location was tested using chi-square test and this showed that the proportion of respondents with lower education which preferred a local source *vs.* another nation one was significantly higher compared to the proportion of respondents with higher education which preferred a local source; and the proportion of respondents with lower education which preferred a national source *vs.* another EU one and EU country *vs.* other country of the world did not differ significantly from the proportion of those with higher education.

Similar opinions can be found in other countries, for instance in Estonia, where an attitude study about local *vs.* imported apples demonstrated that a large majority of consumers (81.3% in 2012) opted for domestic ones (Moor et al., 2014). The motivations why a closer location was preferred by the consumers were not the objective of the present analysis, but their importance is undeniable and was investigated by other studies. Thus, interest in freshness (Adams and Salois, 2010), seasonal diet, food safety (less pesticide and postharvest chemical residues), deep roots in home region (in the case of older consumers) (Henseleit et al., 2007), and better taste (Feldmann and Hamm, 2015; Moor et al., 2014) are frequent triggers for demand for locally produced food.

Evidence from a Romanian survey also suggested that the choice of local and national products was sustained by preference for local varieties (90% of respondents bought non-certified organic food from farmers' market), derived from beliefs and purchasing habits deeply engraved in their routine or from sensorial features appreciation and also from the fact that, in Romania, the image of non-certified organic food largely overlapped with the one of locally produced food (Petrescu et al., 2017). The relatively high share of indifferent respondents to the production location leaves space to the opportunity of attracting more suppliers of the locally produced food "closer to consumer". However, a deeper investigation of the reasons of the lack of preference proves necessary. Bringing together consumer's preferences for "local food" and "organic food" under the form of "local organic food" intensifies the beneficial effects of consumption pattern on environment. A research on vegetable crops in Australia observed that closer production location improved food security by creating climate resilient pathways within food supply chains and that it had a lower environmental impact (related to global warming potential, land and water use, and eutrophication) than the remote one (Rothwell et al., 2016). Moreover, because the use of fossil fuels in transportation, distribution, processing, or storage significantly amplifies carbon dioxide emissions, an analysis of any food item should include aspects related to carbon footprint (i.e., from the degree of processing, transportation mode and distances, and storage method) (Carlsson-Kanyama and González, 2009). Therefore, increasing consumers understanding of local organic food and their interest in it and transposing them into real consumption behavior can significantly influence supply side, shaping towards a more sustainable production pattern.

Deepening the inquiry on location preferences, the consumer purchasing behavior was added to stated preferences in the analysis, by asking the respondents which the origin of the certified and non-certified organic food was they have eaten during the last 12 months (table no. 2). Romanian producers dominate consumers' choices, as the majority of them (66%) declared they purchased more non-certified organic food from domestic producers and one third (31%) indicated they bought Romanian certified foods. It should be noted that a large segment was not able to identify the origin of their organic acquisitions (table no. 2).

Two factors may contribute to these high figures of “I don’t know”: one is that respondents might find remembering consumption decisions that happened 12 months in the past quite challenging and another is the lack of a clear indication of geographical origin of food to consumers on label or packaging. The last cause can be explained by a frequent blurry, missing, and misleading information in a globalized market, where the traceability of the origin of goods and identity of the producer is lost and only the company which is the last link is mentioned (Lipseş, 2010). From a practical point of view, origin of food with its geographical location can turn into a significant purchasing decision factor, requiring higher investments for transforming it into a more relevant, visible, and transparent marketing tool, and, also, into a driver for food chain sustainability.

Table no. 2: Origin of consumed organic food products (percentages of total sample)

	More from Romania	More from abroad	Equal Romania-abroad	I do not know
Non-certified organic food	66%	3%	6%	25%
Certified organic food	31%	10%	9%	50%

- **Consumption frequency and willingness to pay for organic food:** Consumption frequency and WTP for organic food are two basic pillars on which organic sector relies, because the dimension of the market demand is largely influenced by them. The survey data casted light on the fact that majority of consumers (69%) were very frequent users of non-certified organic food, eating it between 1 and 6 times per week, while this frequency was much lower for certified organics (13%) (table no. 3). Various studies depict a large variation of consumption frequency categories across countries; for instance, in Spain, Ureña et al. (2008) took into account a two-groups classification for organic food consumers – regular and occasional – where regular meant that the respondents made purchases at least twice a week, and these summed up 12% of the sample, while occasional consumers bought them less frequently and represented 42% of the sample (and the rest of 46% were non-consumers of organic food).

Table no. 3: Consumption frequency of organic food (percentages of total sample)

	1-6 times/week	1-4 times/month	1 time/2-3 months	1 time/4-5 month or less frequently
Non-certified organic food	69%	23%	6%	2%
Certified organic food	13%	40%	17%	30%

As long as, for Romanian consumers, non-certified organic food proceeded from subsistence farming and small farmers, the high consumption share of non-certified organic food should be understood as a preference for local and national food to which the Romanian consumers attached the characteristics of organic food. Results were in line with the findings related to organic food origin location preference, thus stressing the existence of an opportunity to develop local and national agri-businesses, which can be a link between a cleaner agricultural production and a more responsible consumer. Table no. 4 revealed that consumption frequency of non-certified organic food was statistically significantly higher than the one of certified organic food.

Table no. 4: Wilcoxon Signed Ranks test results regarding differences in consumption frequency between certified and non-certified organic food

Test Statistics ^a	
	Frequency consumption certified food – Frequency consumption non-certified food
Z	-15.092 ^b
Asymp. Sig. (2-tailed)	.000

Note: a. Wilcoxon Signed Ranks Test; b. Based on positive ranks.

Moreover, according to consumers' declared intentions, the positive trend of future personal consumption of organic food consumption will continue (table no. 5). The perceived stability of future consumption for both certified and non-certified organic foods is a promising signal for policy makers, encouraging them to take into account sustainability elements in the development of institutional, legal and policy agro-food instruments.

Table no. 5: Estimation of future consumption frequency of organic food (percentages of total sample)

	Lower	The same	Higher
Non-certified organic food	1%	81%	18%
Certified organic food	7%	81%	12%

The cornerstone in configuring a sustainable agro-food value chain development adjusted to Romanian realities is WTP for organic food. The consumer becomes a trustful partner in building a market organized on the principles of environmental integration, social fairness and economic feasibility through WTP a premium price for organic foods. Consumers were asked how much more were they willing to pay for organic food (compared to conventional) under the form of an open-ended question. When data were analyzed, their answers were grouped in five categories. These categories were created based on preferences showed prior to the development of the survey by a group of ten organic food small shop managers (table no. 6).

Table no. 6: Willingness to pay a premium price for organic food: percentage of price paid in addition for organic food compared to conventional food price (percentages of total sample)

	Percentage of price accepted to be paid in addition for organic food				
	A (0%)	B (1-10%)	C (11-50%)	D (51-100%)	E (more than 100%)
Percentage of persons that accept to pay a certain increase in the price of non-certified organic food	21%	38%	27%	12%	2%
Percentage of persons that accept to pay a certain increase in the price of certified organic food	18%	38%	30%	13%	1%

The highest share of Romanians (38% of them) concentrated their WTP within the interval [1%-10%] (Table 6), which revealed a situation usually different from other countries, where a greater percentage of consumers were willing to pay a premium price for organic food or other quality attributes. For example, 44% of Irish respondents were willing to pay between 1%–5% extra for organic meat, while 29% of respondents accepted to pay a price premium of 6%–10% (O'Donovan and McCarthy, 2002). Moreover, 60%-70% of consumers in the Czech Republic stated their availability to reward with 12%-15% more money the guaranteed food quality and with 11% higher price quality improvements (Miškolci, 2014). Consumer in Greece were very generous in their estimations, reporting a premium of 85%–130% for organic chicken, 103%–125% for organic pork, and more than 115% for organic beef (Krystallis et al., 2006). Almost one quarter (24%) of the respondents in Turkey were willing to pay a price premium of more than 10% for organically raised chicken meat (Gunduz and Bayramoglu, 2011). In emerging market economies, for example, in China, consumers would give, on average, 47% more for organic vegetables and 40% more for organic meat (Yu et al., 2014). A comprehensive review on WTP for organic food and other price related variables by Aschemann-Witzel and Zielke (2015) showed that WTP values for organic food were usually around 30%. In the case of the present survey, after running the Kruskal-Wallis test, a statistically significant difference ($p < 0.05$) regarding WTP a premium price for organic food among groups of respondents with different income levels was observed: respondents with higher income were willing to pay a higher premium price.

Despite the fact that prudence must be kept as WTP usually depicts higher payment levels than the ones consumers actually perform, the figures of the present study are encouraging as long as around 80% of the respondents are willing to pay an additional amount of a higher premium price for organic food (compared to conventional food). This attitude reveals how organic food becomes more and more appreciated and that there is opportunity for creative marketing to encourage consumers in overcoming higher price in favor of attributes related to health, environment, or positive externalities for society.

Adding the origin of food location dimension to the discussion on WTP, an extensive literature review of Feldmann and Hamm (2015) on 73 publications, signaled as a major conclusion that consumers were WTP a premium price for locally produced food. A study on United States (US) consumers also showed they were willing to pay more for organic foods that were locally produced (Hu et al., 2012). When local origin of food and organic characters were weighted against each other, local origin of food was preferred. Moreover, a choice experiment on 637 Danish consumers revealed an orientation to domestically and locally produced fruits rather than toward organic (Denver and Jensen, 2014). A similar preference pattern was observed within a sample of US consumers who were willing to pay more for local (9.37%) than for organic food (6.64%) (Adams and Salois, 2010). In Romania, this orientation was not present: the preference for a closer location did not influence the mark-up in the increase of the premium price that consumers were willing to pay for certified and non-certified organic food, respectively (table no. 7). This finding can be explained by lower incomes of consumers, lower awareness of consumers regarding local food origin, and particularly by a lack of recognized higher quality of locally produced food vs. other sources.

Table no. 7: Kruskal Wallis test results for differences among three groups of consumers with particular location preferences (closer, remoter, and indifferent) regarding the willingness to pay for certified and non-certified organic food

	(a) Test Statistics ^{a,b}		(b) Test Statistics ^{a,c}		(c) Test Statistics ^{a,d}	
	Premium price for non-certified organic food	Premium price for certified organic food	Premium price for non-certified organic food	Premium price for certified organic food	Premium price for non-certified organic food	Premium price for certified organic food
Chi-Square	.727	1.389	.835	2.814	.220	.547
df	2	2	2	2	2	2
Asymp. Sig.	.695	.499	.659	.245	.896	.761

Note: a. Kruskal Wallis Test; b. Grouping Variable: Local vs. other domestic; c. Grouping Variable: Romania vs. other EU countries; d. Grouping Variable: EU vs. other countries in world.

Premium price offered for non-certified organic foods was strongly and positively correlated with the premium price for certified ones ($r=0.683$, $n=424$, $p<0.005$). As can be seen from table no. 8, preference for local certified vs. non-certified organic food did not influence WTP ($p>0.05$). The reason might be that consumers did not perceive a comparative advantage of one category vs. the other that would have worthy paying more. As certified products bear the guarantee of quality, however, a greater attention should be given to the procedures about what is happening behind the certification process to enhance trust in the guaranteed quality (Klintman and Boström, 2008). In Romania, non-certified organic foods often mislead consumers by advertising qualities, such as produced on a small-farm, produced on a traditional way, and no-additives added, which are not always met in a practice.

Table no. 8: Wilcoxon Signed Ranks test results for differences between non-certified and certified organic food regarding the willingness to pay a more for it

Test Statistics ^a	
	Premium price certified – Premium price non-certified
Z	-1.775 ^b
Asymp. Sig. (2-tailed)	.076

Note: a. Wilcoxon Signed Ranks Test; b. Based on negative ranks.

Mann-Whitney U test demonstrated that women were willing to pay more for certified organic foods than men (table no. 9). This can be explained by their higher concerns for a healthier life style. Therefore, in an initial stage, women should be targeted in information and promotion campaigns for organic food. However, gender did not generate any statistically significant difference ($p>0.05$) in any of the other studied cases: WTP for non-certified organic food, frequency of organic food consumption, forecast of future organic food consumption, and preference for a certain geographical origin of organic food.

Table no. 9: Mann-Whitney U test results for differences between women and men regarding the willingness to pay more for certified and non-certified organic food

Ranks				
	Gender	N	Mean Rank	Sum of Ranks
Premium price for certified organic food	M	175	199.13	34848.50
	F	249	221.89	55251.50
	Total	424		
Premium price for non-certified organic food	M	175	208.69	36521.50
	F	249	215.17	53578.50
	Total	424		
Test Statistics^a				
	Premium price for certified organic food		Premium price for non-certified organic food	
Mann-Whitney U	19448.500		21121.500	
Wilcoxon W	34848.500		36521.500	
Z	-1.975		-.561	
Asymp. Sig. (2-tailed)	.048		.575	

Note: a. Grouping Variable: Gender

The study confirmed the importance of local organic food production in food consumption for surveyed people. However, it must be acknowledged that the origin or location of food production for organic food consumption is more than physical distance. Location includes what people feel about a place and how they identify themselves with and relate to it, transforming the food into “a key part of the narrative that establishes their connections to that place” (Schnell, 2013).

The results of this study should be viewed in the context of existing limitations. Thus, they reflect a first exploration of consumer preferences for local organic food, their frequency of consumption and consumer WTP, based on univariate and bivariate analyzes. Future research may investigate the causal relationship between different factors and the consumption of local organic food by incorporating a set of variables adapted to that purpose. Also, a larger sample, representative beyond the region studied here, can offer a wider picture of Romanian consumers behavior related to local organic food.

Conclusions

The sustainable agro-food sector embraces the conviction that purchasing from local sources has the potential to reduce economic and environmental costs, to enhance equity for the community (for example, by supporting communities that carry out activities which are less economically efficient but which bring environmental and human health benefits, such as the cultivation of traditional low-productivity varieties but which are appreciated for their nutritional value and taste) and to preserve rural heritage (through preservation of natural landscapes by continuing traditional agricultural practices, cultivating plant varieties specific to that place, or promoting local recipes). The present study shows that Romanian consumers are prone to local organic food sources, as a great majority of them (65%) prefer locally produced organic foods over other national sources and would choose a domestic item (77%) instead of those imported from other EU countries. This preference was

transposed in purchasing behavior for non-certified organic food, as it was proven by the fact that two thirds of respondents consumed organic food of Romanian origin, compared to only 3% who bought foreign products. Regarding the certified organic food, a high percentage (50%) of unaware respondents of their food source was revealed by the survey. However, in line with the above-mentioned preference it was observed that three times more respondents consumed domestic certified foods compared to foreign certified organics.

From consumer studies perspective, the high percentage of consumers unaware of the origin of their foods signals the need of deeper investigation to discover ways to efficiently convey information about local and organic food that consumers should have. The study contributes to the field of consumer research by providing a complex view on consumers' preferences regarding production location of food by incorporating three levels of investigations: national, EU and global and by bringing together the issues of location and of organic type. This approach can be easily replicated for studies on consumers from other geographical areas, enriching the knowledge on consumer behavior.

The clear preference of the investigated consumers towards locally produced organic foods offers opportunities for local producers, which requires adjustments of their production structures and value chain activities towards these potential demands and market niches. While this can reduce transportation distance and trade costs contributing to more sustainable value chain, it also requires substantial restructuring of value chain activities towards emerging preferences of Romanian consumers and changes in business activities. Thus, it becomes necessary to develop and implement new approaches and practices to provide incentives for consumption of locally produced organic foods. At its turn, this requires greater efforts and dedications from consumer science to deepen the understanding of the relationships between food origin and consumption of organic foods.

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