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## **ORGANIC VS CONVENTIONAL FOOD. A SUSTAINABLE CONSUMPTION APPROACH**

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### **Abstract**

In the global economy context and a more and more saturated market, only innovative products can survive and retain the consumer's attention, by targeting emerging needs and responding to modern issues. This rule applies also to the habitual markets like the food market, where different sectors are developing based on the consumer's new needs and beliefs – organic sector, genetically modified market, molecular gastronomy etc.

Organic food represents one of the most trending and debated sectors nowadays, as it generates solutions for multiple social, economic and ethical problems but at higher costs and by declining other industries like genetic engineering or artificial add-in production. Thus, identifying and understanding the organic consumer's profile represents an essential point in the development of this sector. Also, taking into consideration cultural differences and local diets, a geographical circumscription must be respected when building the analysis.

Given this conditions, the central objective of the present paper is to determine the main factors that influence the buying decision, directing it from a classic conventional purchase to an organic choice. The starting point is a literature review that contributes to identifying the main buying influencers that will stand as a basis for the research – building an organic purchase matrix for the Romanian organic food consumer. The authors' organic purchase decision model distinguishes multiple interacting layers, each one standing as a validation point for the subsequent: demographic and social factors, economic factors, knowledge, personal beliefs, products characteristics, sector guarantees and availability.

The last part of the research is represented by the matrix testing phase on a selected geographical coordinate: Romania. Thus, a quantitative analyses was conducted on the Romanian consumers, the main results supporting the model's variable sequence and highlighting a limitation of the buying decision at the first level of variables: demographic, social and economic factors.

**Keywords:** Organic food, conventional food, purchase decision, consumer behaviour

**JEL Classification:** Q13, Q18, Q52, O13

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## **Introduction**

Agriculture and food products define one of the biggest global markets that is shaping the economy nowadays. Starting from the main conventional sector, the food market has evolved in different directions in the past decades, taking into consideration various determinants like the need of production efficiency (higher production volumes obtained in smaller amounts of time), the need of new products that fit better the producers' and consumers' emerging needs (both from an organoleptic and physico-chemical point of view), the need of continuity, of protecting the environment and human health (Voinea, Popescu, Negrea, 2015).

On a worldwide scale, one of the most trending sectors is represented by the organic food market that has rapidly developed, transforming itself from a niche market to an independent market of global dimensions.

In general, this upward trend results from the increasing public awareness regarding terms like food safety and food security, one of the biggest challenges of the food market being ensuring access for a wider public to availability of superior quality food, in terms of a cleaner environment (Chia-Lin H., 2014). Thus, more and more studies highlight that organic agriculture, by its notional concept and legal framework, covers food safety issues and takes into consideration a wide part of the food security issue (Hamzaoui-Essoussi et al 2013) and that organic food products are superior from multiple points of view (Mondelaers, K., 2009).

Europe is one of the biggest contributor to the organic food sector (Maya, S. R., 2011); on one side the development of the organic market was demanded by the need of reshaping the effects of intensive agriculture in terms of human and environmental health (Central and Western European countries) and on the other side, by multiple collateral needs in Eastern European countries (for example European Union accession for a country involved implementing an organic agriculture framework, or the intense demand of these new food products in other regions in contrast with the favourable soil condition highlighted a sustainable business opportunity). So for Europe the supply is not always located where the demand is, these 2 components of the market being divided.

Given these conditions, the main objective of the present paper is to identify, understand and build a sustainable consumption model based on the main reasons that transform a conventional food consumer into an organic food one and their intensity in generating the buying decision in both cases.

The research methodology includes a quantitative questioner based analyse, based on the consumer's opinion regarding aspects like visual impact of food products, beliefs regarding the purchasing of organic food products, acceptance of a higher prices in favour of multiple benefits. Based on the authors' past studies, Romania was chosen as a geographical coordinate due to its dynamic organic food market – export orientated (MADR, 2016) in the context of an uninformed and unsatisfied organic food consumer.

Before analysing the questioner results on Romania's situation, it is very important to have a general overview of the global or European organic food consumer, in order to be able to relate to a global reference. In this sense, a literature review is mandatory and the results will outline a consumer model based on a sustainable approach.

Nevertheless, the organic food industry will permanently highlight the benefits of its products in contrast with the conventional ones, defending its top position from a price perspective in a very transparent manner, by underlining the advantages in contrast with the high costs.

### **1. Organic vs. conventional food. Cost and benefits.**

Organic agriculture and the organic food market represents a global system of production and management that combines multiple elements like: the best environmental practices, the presence of a high level of biodiversity, the conservation of natural resources, the implementation of high standards regarding the well-being of the animals and a production method that respects the preferences of some consumers for some products obtained by means of natural substances and processes (Badescu et al., 2015). So it can be understood that the organic component plays various roles (economic, social, environmental, etc, cohesion and rural development) in response to concerns resulted from conventional agricultural practices, environment issues and human health disorders.

The prevailing conventional agriculture system also nominated as modern agriculture or industrial farming has delivered tremendous gain in terms of productivity and efficiency. Conventional can be different but, at the same time, share some common features, for example: large capital investment, lack of diversity - single crops grown continuously over many seasons, pesticide usage, huge fertilizers, energy and water inputs (nowadays more than 500 composites are registered at a global level as pesticides, chemical add-ins).

In contrast to conventional food production, the organic sector is define by using strict guidelines and product certification processes, adding specific labelling requirements and visual logos. According to the European Union, all these conditions ensure the consumers that organic food products were obtain in very strict limits regarding chemical synthetic pesticide and synthetic fertilizer use, livestock antibiotics residuals, food additives and other processing aids. Also, organic products guarantee the lack of genetically engineering in the production phase and the prohibition of using GMOs in the processing phase.

Thus, from a notional point of view, organic agriculture and organic food products are superior in many directions than the classic conventional food systems. But in terms of buying dictions, the consumer has a different way of perceiving these benefits in relation with higher costs.

In most of the cases the consumer will associate an organic food products with a normal economic good, because these food products have attributes that cannot be identified by a simple visual inspection or ordinary use. In practice, organic product's attributes are not easily assessed by the consumer, these good being considered credence goods by having qualities which are difficult or, in some cases, impossible to detect, but which nevertheless play an important role for the buyer (Bonti-Ankomah, S., 2006). So in this context, the consumer's awareness and education plays a primary role in assessing the buying decision. Moreover, guarantees are needed: a strict legislation framework, certification bodies, easy identifiable labels.

So in terms of a not so easy way of identifying the distinctive characteristics even after purchase and consumption of organic food, consumers will be able to detect an organic product only if they are informed. This correlation is driving the need of identifying the determinants that stand as beliefs for purchasing organic instead of conventional food.

Thus, recent studies highlighted that the alternative of buying organic food has been associated with multiple factors that, in general, reflect an increased consumer's interest towards personal health condition, animal welfare and environmental support (Siti, M., 2014). The organic consumer's behavior had been subject to different studies since decades, a pattern for sustainable consumption groups being appointed since 1995 (Table 1)

**Table no. 1: Categories of organic consumers, and relationship with consumer behavior**

Organic consumer groups*	Key characteristics
Environmentalists	Concerned about environmental quality
Food phobics	Concerned about chemical residues in food
Healthy eaters	Consumers who, for various (medical or other) reasons, follow particular diet sets
Humanists (welfare enthusiasts)	Concerned with 'factory farming' methods
Hedonists	Believe that a price premium on a product signals a better product

\*Note: It is important to note that various degrees of overlap can exist among the categories.

Source: Davies et al. (1995)

The above consumer behavior pattern is still available today as recent studies debate which of the 5 groups incorporates the majority of organic consumers and which parameter is the most important in taking the buying decision. According to Bonti-Ankomah concern for human health and safety represents the key factor that influences consumer preference for organic food. So Davie's pattern is followed also in terms of category overlapping: food phobics and healthy eaters representing the main groups for organic food consumers. These 2 behaviours are the results of a more visible deterioration in human health over time and, therefore, a motivation for consumers to buy organic food as insurance and/or investment in health (Bonti-Ankomah, S., 2006).

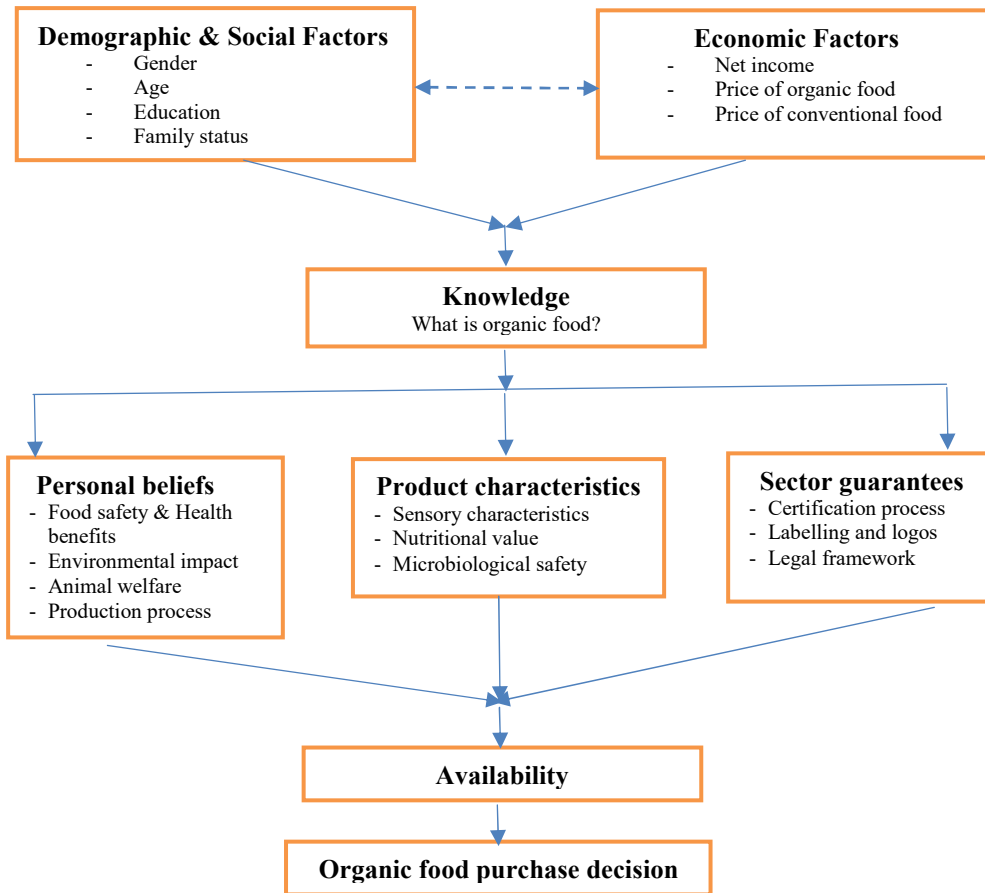
Some other aspects that differentiate organic food consumers from conventional food consumers are represented by lifestyle and environmental attitudes (Shafie, F. A., 2012). In addition to these determinants, demographic variables have also a substantial contribution in forming organic or conventional food consumer groups. Also, organic food consumers tend to be educated and relate to middle or high society classes. In other words, demographic conditions being directly proportional with the net income levels have a very significant influence in accepting or not the higher price in exchange for multiple long term benefits.

Education and society also play an important role in building the food consumer profile, these characteristic influencing the consumer's standard of living. Usually, rural consumers are not interested in the traceability chain of the food product (most of the food products being self-produced); the rural consumer buying most often conventional food and not showing any interest in buying organic food in the future. In contrast, urban consumers tend to be in touch with the latest products that fit better their emerging needs and, if not already organic consumers, declare themselves as potential consumers that intend to buy organic food in the near future (Urena et al, 2008).

So, it is important to highlight that the organic food consumers must be informed in order to support the buying decision of a product that doesn't have any visible positive characteristic in contrast with conventional food at a first visual contact and that the information acknowledged must be confirmed by personal beliefs that guarantee a linkage between the buying decision and future positive actions related to sustainability.

**2. Building a sustainable consumption model of the organic food consumer. Case study on Romanian consumers.**

Taking into consideration human nature, the perspectives regarding conventional and organic food are different from an individual to another and are shaped by multiple social, economic and cultural variables. Based on the literature review it can be observed that numerous studies tend to highlight the same results regarding what determines consumers to opt for conventional or organic food and what contributes to the buying decision. Based on the scientific literature review the authors have proposed a consumer model, built on a sustainable approach (Figure no 1).



**Figure no. 1: Organic food - purchase decision matrix**

The model consists of 4 main areas, two of them containing exogenous factors, while the other 2 containing factors directly related with the consumer’s interest for food traceability and the organic sector. The buying decision is always generated starting from the life set conditions, more exactly demographic, social and economic exogenous factors. These 3 main categories shape the consumer’s preferences, interests and dictate the consumer’s financial availability.

Secondly, after the first factors set favourable conditions for buying more expensive products in exchange of benefits dictated by health interests, social trends or environmental concerns, the potential organic consumer must know how to identify products that meet their emerging needs. In this sense they must know what an organic food product represents. Nevertheless, the consumer's knowledge must be sustained by 3 main pillars, which represent the 3<sup>rd</sup> section of the model:

- Personal beliefs - the consumer will be interested in identifying products that are safe, that sustain human health and don't interfere with the environmental protection principles and animal welfare aspects,
- Product characteristics – the consumer will be interested in food products that attract by a natural and tasty aspect, colour, shape, this suggesting a high nutritional contribution and innocuity,
- Sector guarantees – the consumer must have a security that the products bought are organically authentic.

Last but not least, the buying decision is dictated by the availability of the product, as a potential consumer can be informed, can perform the social and financial conditions to purchase organic products, but the consumer's demand cannot meet the market offer. This is an exogenous factor that can interfere due to regional restrictions or a significantly low consumption rate and inefficient local markets. So all these factor are mandatory and interconnected, as analysing the conditions of a certain purchase filter from the matrix depends on meeting the conditions of the filter from an upper level.

In order to test the above matrix, an exploratory attempt was proposed by the authors. In this sense the results of a questioner based study regarding organic food products were correlated with the current paper's consumer model. Romania was chosen as a geographic coordinate, pervious researches of the authors highlighted that Romania organic food market is a growing market form a production point of view, while the consumption rates remain low.

The quantitative research was conducted in December 2016 - March 2017. The survey was divided in 3 sections: A (buying frequency), B (purchase motivation), C (demographic profile of the respondent). The targeted public consists of both men and women, from urban and rural environments and aged between 20 – 57 years. The questioner was validated for 200 respondents.

The main findings of the questioner research are presented in table no 2. The results highlight that the Romanian consumers usually meet the above consumer model, most cases of non-consumers or consumers that intend to buy such products in the near future being influenced by socio-demographic factors or economic constrains, by the lack of knowledge regarding organic sector, different beliefs or interest or lack of availability.

As it can be seen in the results table, the respondents that are organic food consumers are most women between 31 and 50 years, most of them being married with children and having a medium to high income monthly income – 130 respondents. This can be explained by the fact that in families with children, women represent the main grocery shoppers and food safety and health aspects tend to have a growing influence in the buying decision.

Also, it can be observed that most of the respondents that are organic food consumers have superior studies and have a medium to high income. This represent a general hypothesis of the organic consumer model, where consumers with superior studies and high incomes tend to invest more in health aspects, including in the daily grocery basket.

**Table no. 2: Consumers versus non-consumers of organic food based on demographic data**

Variable	Organic Consumers					Non-consumers
	Food safety	Health benefits	Animal welfare	Environmental benefits	Premium price & trends	
<b>Gender</b>						
Male	5%	4%	0%	5%	0%	21%
Female	23%	34%	2%	1%	2%	3%
<b>Age</b>						
20 – 30	4%	1%	1%	1%	2%	2%
31 – 40	15%	16%	1%	1%	0%	6%
41 – 50	8%	12%	0%	4%	0%	5%
>50	1%	9%	0%	0%	0%	11%
<b>Education</b>						
University	26%	36%	2%	6%	2%	15%
High School	2%	2%	0%	0%	0%	9%
<b>Family Status</b>						
Single	4%	5%	2%	4%	2%	7%
Married without children	1%	8%	0%	0%	0%	12%
Married with children	23%	25%	0%	2%	0%	5%
<b>Income</b>						
<500 €	2%	2%	0%	1%	0%	10%
501 – 1000 €	23%	9%	1%	5%	0%	10%
>1000 €	3%	27%	1%	0%	2%	4%

Regarding the non-consumers category, the respondents were asked to write down a reason that influence them in the buying decision towards conventional food. The most frequent response was the high price of organic food products correlated with the lack of knowledge.

### Conclusions

The organic buying decision is determined by multiple factors, many of them being interdependent. For the Romanian market, the price of organic food represents a variable that often blocks the purchase intention. Thus, the price of these food products usually relates to the way in which consumers understands the organic sector in relation to its costs and benefits. Also this variable depends on the consumer's demographic conditions, which represent main influencers of the consumer's net income, thus triggering the interaction of the layers from the purchase decision model.

The result of the study highlight that men and women have different interests when buying organic. Men don't buy organic food as much as their counterparts. Also, men consumers usually buy food without much interested in the origin of the product or if they buy organic, they tend to be more preoccupied by the environmental impact of the food traceability chain than women who are more interested about food safety and health benefits.

Thus, the organic purchase decision matrix has been tested and validated for both organic consumers and non-consumers. For the category that fits the demographic, social and economic profile, the model follows the described flow and based on the consumers'

beliefs and market availability the impulse results in an organic buying decision. For the non-consumers, the decision stops at the first level from which we can conclude that the demographic factors are essential influencers in generating next steps of the buying decision: organic food notional acknowledgment of costs related to benefits and personal beliefs.

Nevertheless, reporting these results to the above matrix, we can identify that for Romanian organic food non-consumers the buying decision is limited at the first set of variables: demographic aspects and economic factors. So, we cannot discuss about a deeper analyse of consumer's beliefs regarding the organic sector, or if their knowledge regarding these products and the main benefits they come with (legislation framework, certification process, easy-identifying labelling system) are correctly assimilated and understood.

A future development direction of this paper can achieve an in-depth research regarding the consumer's knowledge on organic food in order to identify the main gaps. Furthermore, this can help in identifying the misunderstandings and their main sources in order to contribute in building informational materials that can develop a more sustainable organic market.

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