

CHALLENGES OF THE CONSUMPTION BEHAVIOUR TOWARDS THE ECO-FOOD PRODUCTS. A STUDY ON THE SUSTAINABLE HUMAN NEEDS

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Abstract

The human needs and the consumer behaviour are in a permanent transformation and having more sustainable and healthy food becomes a priority. The consumer behaviour follows the trends of the population needs. Eco-food consumption is increasing, as a result of agricultural, nutritional and food production policies. The producers in the eco-food branch should focus on quality that meets the consumers' demands. This study is focused on eco-food products analysis from the new consumption behaviour and sustainability point of view. The main purpose is to analyse the attributes perceived by consumers and their interest related to viability and sustainability of the eco-food, in association with expected benefits. The methods used for research are the market survey and focus group, alongside the incursion in the literature related to eco-food consumption behaviour. The research area is delimited on Iași County population, only for the eco-food products consumers. The results indicate a growing interest for the eco-food consumption, especially among middle-aged people, interested in better quality of life, personal and family health, and a sustainable new lifestyle.

Key words: behavior, consumption, development, eco-food, needs

INTRODUCTION

Human consumption is a topic of major interest for the current research and production environment. However, an analysis of it only in the general way is nonsense, given that the categories of consumption vary a lot, according to multiple criteria and with the involvement of numerous influencing factors. Consumption is a determining factor of production and has direct implications on resource management. A simple view of the link between these components indicates the permanent circularity of the resource-production-consumption relationship.

The main subject of paper is food consumption, from the perspective of consumption behavior of ecological food products. From here derive some particularized subthemes, at least by referring to the existing literature. The needs of food consumption are considered as a vector of the change in consumption behavior, the way to adapt organic food producers to these needs, the orientation of European policies regarding

the production, marketing and consumption of organic food products.

The analysis of general human consumption is based on Abraham Maslow's Hierarchy of Needs Pyramid, according to which among the basic needs of people are the needs of food consumption [16]. That is why the attention directed to the evolution and particularities of food consumption is fully due, especially in the context of the overlap of the new food consumption models with the major challenges of food and nutrition policies, as well as with the issue of the sustainability of the needs expressed by consumers today.

The present work emphasizes the specifics of food consumption in a modern, evolved society, where consumption needs are considered from different perspectives, by referring to the: time, well-being, quality of life, emancipation, etc.

Throughout the paper, reference will be made to the specific situation in Romania. The connection of the concepts of food consumption behavior and sustainability proves to be justified, given that among the

objectives of sustainable development horizon 2030, there is also Objective 12 "Sustainable production and consumption" [19].

The main arguments in favor of approaching this topic are supported by related aspects such as: the alteration of production resources, difficulties in waste management, the health status of the population, the protection of environmental factors, government spending, etc. These global concerns are not very recent, but are now finding their place in organic farming policies. A first consideration of sustainable consumption was in 1994, in Oslo, when The United Nations Environment Program (UNEP) [20] defines sustainable consumption as "the use of products or services to meet the demand of consumers and enhance quality of life while reducing the use of non-renewable resources and waste generated during consumption". [1, citing 8 and 11]. It is an undeniable fact that technology and food production processes have advanced greatly, which has allowed the supply and variety of food products to be constantly increasing in relation to the amount of food consumed. According to National Institute of Statistics [13], in 2022 a Romanian consumed, on average, 2.268 grams of food/day, 2.345 grams/day in 2021 and 2.293 grams/day in 2020. Qualitatively, the average net daily consumption is assessed by the caloric content of food; in Romania, from 3,464 calories/day in 2015 to 3,558 calories/day in 2021. But, the quantitative increase in food consumption does not mean a qualitative one.

Another aspect in the analysis is the major social changes that have taken place in the last 10-15 years in Romania. The increase in the standard of living and access to information have made individuals develop superior capacities for choice and decision, to become emancipated, to consume more variedly. The economic changes that our country has gone through have produced major changes including in food consumption behavior. Economic growth is reflected in GDP 2.5% higher in 2023 compared to 2022, and 4.5% higher in 2022 compared to 2021 [13]. The higher level of human development is indicated by the increase in the HDI (Human

Development Index) value from 0.811 in 2015 to 0.821 in 2021 [20]. These changes attracted the orientation towards the consumption of organic food, Romanians becoming more and more interested in these products, for reasons related to well-being, health, a new lifestyle and emancipated behavior, understanding of sustainability, etc. The literature shows the principles of ecological consumption: "Buying organic foods depends on the respect of three essential principles: health consciousness, the equilibrium of the economic situation, and the protection of the environment." [15 citing 9].

The problem of organic food consumption, reflected in the adaptation of consumption behavior, is anchored in European policies that emphasize the quality of food consumption in connection with the quality and depletion of agricultural production resources.

[2] claim that "Food quality is one of the main strategic goals of the reformed CAP, taking into account the impact of agriculture on the climate change", and in this context "the consumers are playing an important role in boosting the food quality all over EU." The increase in sales of organic food products is supported by the production of an increasing number of such products and their assortment variation.

In Romania, the most consumed organic food products are: dairy, soft drinks and basic foods, fruits and vegetables, eggs.

This is the context in which we propose the objectives of the paper:

O1. Analysis of the interest of Romanians in Iași county for the consumption of eco-food products;

O2. Perception analysis of the reasons and benefits resulting from the consumption of eco-food;

O3. Establishing a connection between food consumption behavior, human needs and the challenges of sustainability requirements. Specifically, this study is focused on eco-food products analysis from the sustainability point of view, the market attitude towards its qualities and consumption interest for this category of food. Compared to other approaches in the specialized literature, this

paper emphasizes the three-dimensional aspect of the influencing factors of eco-food consumption: the policies for organic agriculture, the change in consumption behavior and the consumption needs given to the sustainability requirements.

MATERIALS AND METHODS

The organization of the paper is based on the analysis of four fundamental notions: consumption behavior, ecological agriculture, ecological food products, sustainable needs. Starting with a foray into specialized literature, we argue the research approach with statistical data and information, with national and international recognition. In this sense, databases such as: Eurostat, INS, UNEP, EC are used [7, 13, 20, 5] Next, we will present the notions that allow the argumentative transition to the main topic of the paper: the reasons and interest of the people of Iași for the consumption of organic food products.

The concept of consumer behavior appears in a vast and diversified profile literature, including an interdisciplinary one, but it is less present in the local literature. The American Marketing Association (2017) [1] defines consumer behavior as "the dynamic interaction of affect and cognition, behavior and environmental events by which human beings conduct the exchange aspects of their lives". In agreement with other definitions, consumer behavior involves a number of processes that characterize the selection, buying, use of products, services, ideas or experiences by individuals or groups to meet their needs and desires [3 citing 18]. The variation of studies on food consumption behavior is not very large, and regarding the analysis of sustainable consumption, the literature is very recent, only in the last 5-10 years gaining a greater scope. Muresan et. all (2021) mentions regarding food consumption behavior that "A substantial number of studies have underlined that consumers have positive attitudes with respect to sustainable food behavior but also that the behavior is influenced by the socio-demographic characteristics of consumers." [12].

To analyze the problem of consumption, it is necessary to consider consumption needs. Maslow's pyramid indicates food consumption at the base of the pyramid, but given socio-economic progress and demographic changes, transformations are also noted in consumption behavior. These two variables, consumption needs and consumption behavior, influence each other. In fact, the consumer behavior follows the trends of the population needs, and the consumption of eco-food shows that it is a component of two categories of needs: basic and those at the top of the pyramid (development, self-improvement, self-actualization).

Eco-food consumption behavior is interdependent with organic agriculture. In fact, the consumption of eco-food is directly associated with the production systems of organic agriculture, which is booming in Romania. The consumer benefits from the results of organic production rules, but knows less about the aspects that guarantee quality through product certification, organic cultivation techniques, EU regulations, etc. Organic production techniques mandated at EU level include: crop rotation, banning the use of chemical pesticides and synthetic fertilisers, limits on the use of antibiotics for animals, banning genetically modified organisms (GMOs), free-range farming and the use of organic feed [6]. The basic rules in organic production are: protecting the environment, maintaining biodiversity, animal welfare, strengthening consumer confidence in organic products [6]. Romanian agriculture generating ecological products is focused on four main branches of production: vegetable products, animal products, processed products, beverages [4].

The consumption of organic products in Romania has increased, but at a slow pace. Representatives of large commercial chains mention that "Although they have had sustained growth in recent years, organic products still remain a niche category. In 2023, the consumer was much more informed and aware, wanting to know what they were buying, where it came from, how it was packaged and transported." [14].

Regarding the size of the organic food market, it is determined by food consumption behavior and consumer perception of organic food. An impediment to the detailed analysis of this market is that the reported data is not updated or is very difficult to identify. For this reason, we will refer to the sales of organic food products from 2018. At the EU level, they were 37.4 billion Euros, almost as much as in the USA (40.6 billion). In the top of the countries with the largest volume of sales of organic food products are: France 9.1 billion Euros, Germany 10.9 billion Euros, Italy 3.5 billion Euros. Dynamically, at the European (EU-28) level, the organic food market grew from 20.8 billion Euros in 2012 to 37.4 billion in 2018, and organic agricultural land grew by 33.7%. A general situation regarding the progress of the organic food production base, by processing Eurostat data from 2021, is presented in Table 1. We chose this reference indicator, since organically cultivated land is the basis for obtaining the raw material for food production in the ecological system.

Table 1. Total ecologically cultivated area (ha.), fully converted and under conversion. 2012-2021, EU-28.

| Country | 2012 | 2021 | % |
|----------|-----------|------------|-------|
| Portugal | 200,833 | 768,800 | 282.8 |
| Croatia | 31,904 | 121,924 | 282.2 |
| France | 1,030,881 | 2,775,671 | 169.3 |
| Hungary | 130,607 | 293,597 | 124.8 |
| Bulgaria | 39,138 | 86,310 | 120.5 |
| Romania | 288,261 | 578,718 | 100.8 |
| EU (1) | 9,457,886 | 15,921,242 | 68.3 |

Source: Eurostat, 2023 - Developments in organic farming [7].

Romania ranks very well, in 6th place, compared to the EU average and other countries. In the 9 years of transition to ecological production systems, the agricultural area cultivated ecologically has doubled, and Bulgaria and Hungary surpass Romania's situation by very little (about 20%).

Within ecological production systems there is also the consumer who, through his behavior, strongly influences the consumer market. Motivations, perception, expected benefits, preferences and actual consumption behavior are qualitative factors with a major impact on the evolutionary trend of this market. In

addition, it is important to note that eco-food is a practically accepted concept relatively recently in the current language of the population. Regarding the reasons underlying the consumption of eco-food, the most significant are: health, high quality, personal beliefs and values, the desire to support local producers, environmental protection, curiosity, ethical norms, animal protection, positive previous experiences [3].

Muresan et. all (2021) shows that "consumers' attitudes towards sustainable food behavior are mainly influenced by age and education level and the health issues represent an important aspect that defines food consumption behavior" [12], and [15] mentions that "most consumers are convinced that organic products are more nutritious than non-organic products.

However, the most common reason identified was that organic food is considered safer and more nutritious, the second most common reason was protecting the environment, followed by supporting the economy and local communities." [17].

The present paper analyzes the determinants of the consumption behavior of eco-food products, considering the constantly changing human needs and the requirements of a sustainable development. Methodologically, an empirical-descriptive content is developed, based on recent statistical data and specialized literature. The study used as main methods for research the questionnaire, focus group, and, also, the incursion in the reports of eco-food consumption behavior. The variables used for the analysis are: consumption motivation, perceived quality, consumer confidence, price perception, expected benefits.

The research area is delimited on Iași County population, Romania, the main goal being to identify and analyze the parameters with influence on the consumption interest of the eco-food products. The research universe is limited to consumers of organic products from supermarkets in Iasi county (Lidl, Carrefour, Kaufland).

The investigated clusters are made up only of consumers who recognize the ecological label, consume by conscious choice these types of food, habitually. We chose to do the study on

Romania, namely Iași county, because the market for organic food products is growing, consumers have a new consumption model based on supporting local production, and being sustainable and "eco" is a new trend in Romanian food consumption. Other arguments also supported by literature [3]: Romanian market of organic food products is different from the Western European markets in terms of quantity, diversity, accessibility, in terms of culture, level of information and confidence of consumers and producers.

The respondents participating in the establishment of the database, following the application of the questionnaire with 15 questions, were in number 136; the distribution was done in the online environment, but also at the place of purchase (supermarket).

The focus group was organized on a small sample of 9 people, but representative of the study topic. Even if qualitative research can lead to subjectivism or is not widely accepted, it has the quality of providing valuable information about perception, attitude and motivation.

RESULTS AND DISCUSSIONS

Through the quantitative analysis, based on the questionnaire, two directions of analysis were considered: (1) the experience of consuming eco-food products; (2) the interest shown for this type of consumption.

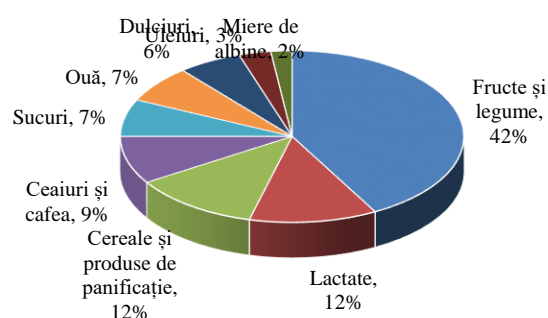


Fig. 1. Responses to Q1 "Which organic food product do you prefer to eat on a regular basis?"
 Source: Own results based on the respondents' answers.

The general profile of consumers of organic food products in Iași county is: predominantly female, age 35-45 years, urban environment,

medium to high income, higher education level, family with children, increased interest in health and a balanced lifestyle.

The results of the market survey are presented next, descriptively and interpretatively (Figures 1 to 5).

We chose these product categories in accordance with the statistics that mention the organic food products with the most frequent consumption, respectively products that we visualized as predominant on the shelf. It is found that the most preferred are organic fruits and vegetables (42%), followed by dairy products (12%), cereals and bakery products (12%). It is observed that staple foods also remain the most preferred. All valid responses were selected according to consumer profile, so the age of all respondents is 35-45 years old.

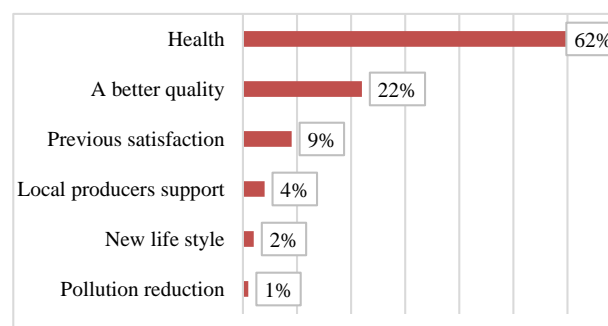


Fig. 2. Responses to Q2 "What is the main reason why you decided to eat organic food?"
 Source: Own results based on the respondents' answers.

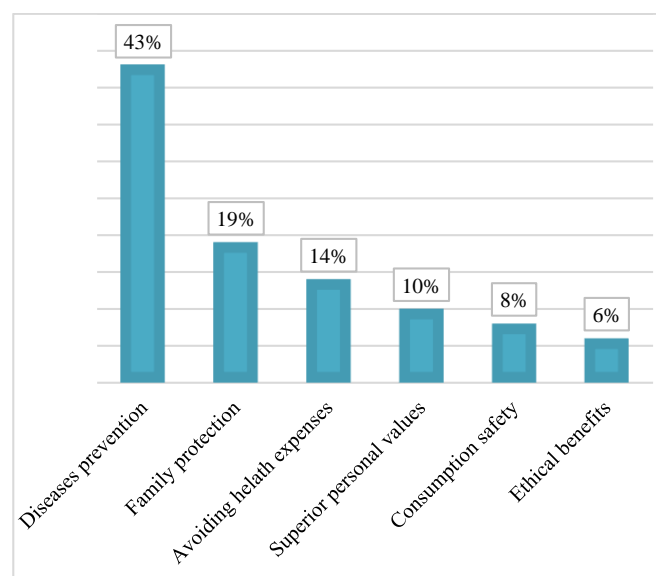


Fig. 3. Responses to Q3 "What is the most important benefit you expect to get as a result of eating organic food products?"
 Source: Own results based on the respondents' answers.

Consumers of organic products in the chosen research environment, like those in most similar studies, mention health as the main reason for consuming organic food products (62%). At a long distance, but with a significant weight, is also the better quality of these products (22%). In contrast, a new lifestyle or reducing pollution matters too little (2% and 1%, respectively).

The health-related benefit, i.e. prevention of illness, is the most important for 43% of respondents, followed at a considerable distance by family protection (19%) and avoidance of health expenses (14%). Ethical benefits matter very little (6%), meaning the contribution to the protection of the environment and the well-being of animals, compliance with civic norms, altruism, etc.

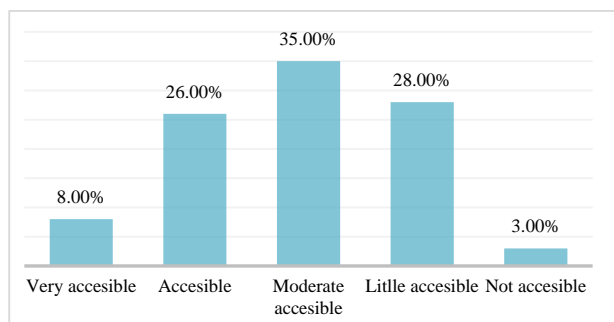


Fig. 4. Reponses to Q4 "How do you assess the prices of eco-food products compared to the prices of similar products, but which do not come from the organic production system?"

Source: Own results based on the respondents' answers.

As can be seen from the graph above, there are not many consumers who appreciate the prices of organic food products as very affordable (only 8%), and 3% consider them unaffordable. However, most (35%) say that they would have no difficulty in purchasing these products. Accessibility means the availability of payment and fitting into the budget allocated to the food consumption basket.

Consumer trust in eco-food products is predominantly at a higher level (total trust, very high and high, respectively 18%, 24% and 38%), these benchmarks adding up to a trust degree of 80%, which seems natural given that the respondents are consumers of organic food products.

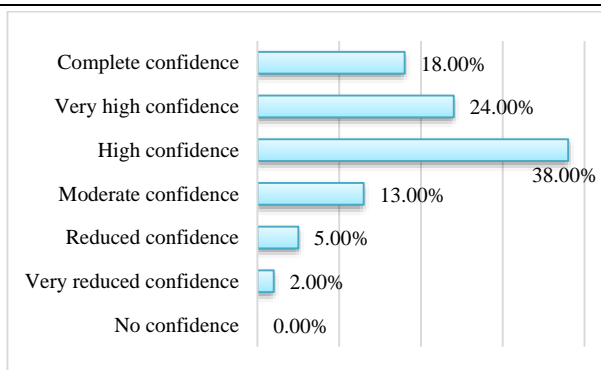


Fig. 5. Reponses to Q5 "How confident are you about the organic certification of the food products you consume?"

Source: Own results based on the respondents' answers.

Regarding the focus group, its organization was more difficult and the aim was to form a sample as representative as possible.

Table 2. Focus group analysis of perception in eco-food consumption

| Attribute | Synthesis results from the processing of the collected information |
|-----------------------------|---|
| Appearance | A bit eye-catching but not garish, compatible with the natural look |
| Attractiveness | High, proper |
| Expected benefits | Health, healthy lifestyle, satisfying decent needs, balance, quality |
| Availability | Average, not all necessary products can be found, specialized shelves |
| Labeling | Easy to recognize, markings, logos, rigorous signage |
| Purchase intent | More preferred, frequent purchase, only certain product categories |
| Confidence in certification | No details are known about the certifiers, there are some doubts |
| Price | Even if it is slightly higher, it is acceptable |
| Organoleptic properties | Much more pleasant taste, natural flavor, natural color, pleasant smell |
| Consumption recommendation | A referral network is created, especially through quality and safety |

Source: Own results based on the respondents' answers registered and transcribed from the focus-group.

The profile of the focus group consumers is very similar to that of the survey participants. In the course of approximately 90 minutes, a semi-structured interview was conducted, given that we used the same reference parameters as in the survey: reason for consumption, expected benefits, price perception, degree of trust; to these we added other parameters, summarized in Table 2.

From the synthesis of the research in the focus group, the following specific aspects are concluded:

- the predominant keywords are: health, pleasant, natural, protection, guarantee;
- there are some female-male differences: women are more concerned with purchase and consumption, the main reason being care for the whole family;
- the predominantly consumed products are: dairy, bakery, coffee, juices, eggs;
- an adjacent motivation for the consumption of organic food is the ethical sense and responsibility assumed towards future generations, towards the environment and natural resources;
- the notion of sustainable need was less recognized, instead that of sustainability was considered a normality in responsible consumption behavior;
- the participants were very animated by the topic.

The results of the paper indicate a growing interest for the eco-food consumption, especially among the young and middle-aged people, interested by quality of products connected with personal health and a sustainable new life style.

CONCLUSIONS

Consumers of organic food products in the chosen research environment are informed and become increasingly aware of the specifics of this type of consumption, as well as the benefits obtained. Considering the eco-food consumer's custom behavior and consumption needs, producers and marketers can advertise the product in a formal and informal manner.

From the perspective of European agricultural policies, there is an acceleration of the pace of encouraging organic consumption, starting from strategies for the fastest possible transition to organic production systems. Our conclusion regarding this aspect is that a closer monitoring of industrialized food production, which has reached alarming levels, is sought, or there are major concerns about the way natural resources are managed, ecological production being a sustainable solution.

The results of the study on the consumption behavior of eco-food products, from the

considerations of more sustainable needs, show that the population in the reference area of the research, Iași county, has as main reasons for consumption: personal and family health, product quality. The expected benefits are: a new more sustainable lifestyle, the contribution to reducing the pressure on environmental factors. The work, however, also has some limits, primarily by restricting the research area to a single county in Romania. Then, only a descriptive analysis was performed. The work could also have addressed the issue of the vulnerability of eco-food products, respectively of counterfeit products. The usefulness of the content of the paper: it can support the implementation of information campaigns and awareness of the importance of organic food consumption, with an impact on encouraging production at the local community level. It can also be considered a form of practical approach to the notion of sustainability, from the perspective of analyzing the needs for which individuals make consumption commitments.

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