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Article

Organic Food Products Labeling Innovation: the case for Sustainable Food Consumption Behavior

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Abstract: The present context regarding development of the food products trade at European Union level presumes manifestation of some tendencies and challenges meant to claim at the highest level the adaptation capacity of economical agents - both producers and traders. Among these we can take into account their need to comply with organic product labeling standards as an integral part of food products safety policies at Union level. In order to be able to implement a proper label type, not only from the point of view of standards but especially from the perspective given by the consumers perception and motivation toward a healthy sustainable food consumption, producers have to constantly innovate, to find new design solutions for food products labels. This article propose an exploratory research in the form of a field survey that highlights the perceptions of Romanian and Serbian consumers, altogether from the urban environment in relation to organic food labeling and how they influence purchasing decision-making. A random number of 373 Serbian consumers' questionnaires, respectively 1262 Romanian consumers' questionnaires have been validated, the results showing interesting results from the point of view of national consumption profile differences due to different cultural, economic and social factors as well as different levels of integration within European economy for the both countries. Main conclusions of the research stress the fact that perceptions regarding organic food products labels are constructed around variables like: type of information to appear within the label, category of information that are missing from labels, degree of producers interest in proper labeling of organic food products, relevance of the information on the organic food labels as regards the decision to purchase the products etc. Conclusions propose some possible developments for innovative future characteristics for organic food products labels.

Keywords: products labeling; organic food products labeling; labeling innovation; sustainable food consumption; buying decision.

1. Introduction

Modern organizations demand a greater capacity to adapt to business environment requirements. This desideratum entails the permanent investigation of this environment and, in particular, of the tendencies regarding clients' perception.

In the food industry, the interaction between products and consumers is constantly under the pressure of immediate consumer motivation, being mediated by the packaging used to present and protect the products.

The development of the promotional communication capacity of food producers' organizations becomes essential for preserving competitive advantages and facilitating this interaction. Also, the

development of a system of knowledge management at the organizational level is imperative for optimizing the activity [1].

In this context, the integration of product-related information and the image of brands enjoys the input brought in by the product labeling process.

Food products labeling has been steadily developing over the last 50 years as a result of technological progress and the need for a consistent definition of quality standards in the field.

The label, seen as the main constituent element of the packaging, especially for food, is in fact a sum of information defining the product in question, whose essential function is to provide technical details about the producer, the time of production, the technology used, the term expiry date, product class, ingredients used, etc.

Labels are currently presented in a multitude of forms, being printed, lithographed, engraved or illustrated, containing product identifiers, adherent to it or joining in one form or another the product.

The labeling process is currently very well regulated both at national level and especially at the European market level. In the last instance, labeling supports the exercise of fundamental rights for consumers - the right to be informed before purchasing a product or service, information that needs to be complete, correct and accurate on the essential characteristics of the products in question.

The abundance of information passed on labels in the form of abbreviations or the use of technical terms that are often unfamiliar to the general public is a frequent practice that contributes to increasing consumer dissatisfaction in the act of consumption.

The current context in which the Romanian market is abounding in a diversity of food products, whose origin is very heterogeneous, requires at both decision-makers and consumers level a stricter approach to the problem of their correct labeling. A civilized trade implies respecting consumer rights and a permanent dialogue between producers, consumers and state institutions.

Consumers need constantly to optimize consumption decisions, both quantitatively and qualitatively. Starting from the abundance of products, in order to achieve this goal, an extremely important tool is the correct information based on the product labels. In the case of food products, because of their specificity (a higher degree of perishability, very different product characteristics based on the place of provenance or the manufacturing technology used, etc.), the purchasing decision pressure is also higher than other types of products. This leads to an increased need of information for the consumers, which is have to be accessible precisely when the purchase is made with the help of labels.

The present article aims to investigate in the form of an exploratory approach the ways in which the perceptions of the Romanian and Serbian consumers from the urban environment are formed regarding the quality of the organic food products and the content, importance and functions of the labels present on the organic products from the market. In particular, it is worth highlighting the variables describing these perceptions and the relationship with the variables that define the purchasing decisions. The degree of influence of some factors on the others provides the premises for elucidating the mechanism by which the satisfaction in consumption can be optimized, based on a better streamlining of the buying behavior.

In this respect, the research done is describing the perceptions of Romanian and Serbian consumers regarding the organic products on the market that are marketed also in other European countries based on the information provided by the labels. Conclusions offer new research horizons aimed to successfully elucidate the process by which consumers can optimize the level of satisfaction as a result of purchasing appropriate food in the context of the evoked current needs set and of the actual lifestyle of individuals.

2. Conceptual Framework of Organic Labeling

Creating a label is, in fact, a complex process by which it is first and foremost to set up a monitoring system that ensures that the real product meets defined criteria [2].

The label has become over the past few years not only a marketing tool but a complex concept that enables all actors involved in products trade exchanges to transfer information and join a

common reference framework with regard to quality standards the marketed products have to fulfill. Especially in the case of food products, this has become a must, because the offer has being diversified a lot and it has not been controlled rigorously enough from the point of view of quality classes by the competent institutions.

A classification of labels is difficult to achieve, one of the few criteria that can be used in this respect is related to the nature of the information it carries. Thus it can be discussed about [3]:

- Temporal status (technical marks or experimental marks, classified according to the way of realization and the ability to guarantee the quality of the products. Experimental labels have a lower lifetime, being subject to changes)
- Source (labels may come from different sources, so there may be labels produced by independent certification organizations, consumer associations or distributors, as well as classic labels made by manufacturers themselves)
- Constraints related to the attribution of the information presented (labels must comply with certain terms of reference, differing from this point of view according to the information elements to which they refer - standards, certain classes of information, etc.)
- Credibility (there are brands with different levels of credibility, showing a close correlation between their commercial effectiveness and the degree of credibility they have in relation to consumer perception).

Capital linked to a particular label can be defined as the set of consumer associations and behaviors regarding some labeled products that favors strongly and differentiated products that are labeled against unlabeled products [2].

Research has highlighted a number of directions in which consumers can be influenced taking into account the capital of a particular label: in terms of perceived quality, from the point of view of uniqueness and from the point of view of confidence and appreciation enjoyed by the manufacturer.

3. Issues related to the correct labeling of organic food products

Characteristics at the sensory level of food products today are no longer based on natural elements due to the intensive use of food additives in recent years. Thus, many products with flavors, tastes or artificial textures are available on the market and are nutritionally unbalanced, offering a balanced and healthy nutritional profile [4].

Consumers - especially young people, are sensitive to the sensory characteristics of food, making the decision to consume a particular product solely on the basis of the taste it possesses.

Proper labeling involves providing food information in a complete and coherent manner, if we discuss about its nutritional profile, it is necessary to present the full profile made by competent institutions.

The unfair practice of many manufacturers to provide only part of the nutrition information on the packaging by means of some suggestions in the form of claims meant to highlight the product, such as "high iron content", "ensures the daily requirement of vitamin B", etc., is a form of masked consumer manipulation, in fact the complete nutritional profile of the product in question is not balanced and does not provide the full daily needs of an adult in conditions of a healthy eating.

In a research regarding the way that U.S. consumers are using food products labels, after a cluster analysis it was shown that eight specific information can be organized in two main categories of label usage: for shopping everyday needs and for specific dietary needs [5].

The results are showing more importance given to the nutrition label information in case of dietary needs and among the most active consumers' categories regarding nutrition label information use it may be highlighted women, consumers with higher degree of education, frequent label users, consumers between 50 and 59 years of age and consumers having health issues.

Within a qualitative type study conducted by Adrienne Hall-Phillips and Purvi Shah, authors have pointed out that expiration date of food products represent a very important information regarding the purchase decision within stores. From this perspective the study reveals different affective, cognitive and behavioral consequences of the confusion created by various formats regarding expiration dates, like dissatisfaction, cognitive dissonance, decision deferment, negative word of mouth, shopping fatigue and reduced loyalty and trust. [6]

In a recent article published in June 2017, L. Malloy-Weir, M. Cooper are showing through an extended scientific literature review that for U.S. consumers empirical relationship between people degree of literacy regarding health and use of nutrition information from products labels is inconsistent and contradictory. Thus, consumers with low levels of health-related literacy are having a different approach in comparison with those having a high degree of literacy when they are making judgments about food products, and from this point of view can benefit from measures directed to improvement of their understanding and usage of nutritional label information. [7]

The consumer's perception regarding the importance and content of food product labels is also dependent by the level of formal education attained by individuals, most of studies reflecting that higher levels of general education are determining a supplementary interest over the label issue.

The education of adults represents a complex task and its confronting with different problems like: different degree of retention of knowledge, different degree of information and improvement of training during professional life, different receptivity of knowledge that is required to be assimilated, increasing resistance to change etc.

From the point of view of the consumers implication in the field of labelling of food products, programs aimed to educate consumers regarding the importance of access to information, the need to preserve the consumers rights, are a must and can offer solutions for a long run.

4. Research regarding labeling opinions, influence upon consumer behavior

Consumers are more and more selective when they purchase food products due to the risks and requirements related to health problems.

A research made on consumers from Malaysia shows that Food Safety Certificate represent a viable instrument designed to build consumer trust and to optimize the decisional buying process. [8]

In the same line, a study realized in Korea having 1019 respondents shows that consumers have a positive attitude toward "front of pack labelling" – the system that is presenting nutritional information about the product using a color code. Consumers are appreciating the information provided, majority of them considering front of pack labelling necessary in order to optimize the daily consumption of nutrients. [9]

Another way in which different type of presenting nutritional information is made is the use of so called "traffic light labelling". It consists in using the figurative form of an actual traffic light in order to signal the levels unappropriated for different type of nutritional element like total fat, amount of energy sodium, sugar etc. This type of labelling is used by policy makers and governments as a tool good for public health intervention in order to improve the dietary habits of general population. [10]

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Consumers will respond at different type of labelling systems according to different factors. Canadian consumers' opinion study regarding the front of pack nutrition rating system has highlight the fact that the classic Canada Nutrition Facts table is perceived as friendly, helpful, credible and purchase decision influential. [11] In the same time Canadian consumers are perceiving positively also the traffic light nutritional system and front of pack system.

If we talk about the willingness of the consumers to pay attention and to use nutritional information from the products labels, there has been a lot of research showing a general positive attitude influenced by a wide range of factors like educational background, the context of purchase etc. Thus UK consumers' research conducted by Grunert et al., shows that 27% of respondents have looked on the nutrition information on the label of products. [12]

The authors also have been testing the degree of understanding of the consumers regarding the information read. Differences between the level of understanding and the level of usage of the products are explained by objective behavior as usage of food products with high nutritional value is influenced by the interest in healthy eating meanwhile level of understanding of the information from the label is related with the nutritional facts and prior knowledge of the consumer achieved through education.

A study referring to 90 respondents from Sri Lanka, has identified the relationship between several types of variables that referred to the reasons why consumers are examining food products labels, the reasons why they do not examine them and the mandatory information required to appear on the labels. [13]

The results indicated that about 98% of respondents tend to examine food labels. From these, 29% are always examining labels, the main reasons being: checking product compliance for the vegetarian diet, avoiding food-borne illness, religious motivations, verifying the origin of food in terms of typology – organic or not.

About 80% of the respondents think that labels exists because they have to indicate the products expiration date, meanwhile 74% have as a principal reason the indication of nutritional composition. About 41% of the respondents think that labels are a legal requirement to be met anyway. Other conclusions are showing that majority of consumers are preoccupied by the nutrients state, the fat content and calories content.

A particular information is the fact that 21% of respondents have been influenced regarding the buying decision process by the Monosodium glutamate content. Because, very often the information on the labels was the only information available to consumers at the time of their purchase, respondents were asked to prioritize the information they deem mandatory on the food products labels.

Thus, the following categories were noted in order: the name of the food, the expiry date, the list of ingredients, the quantities of certain ingredients, the information on the special conditions of disposal or use, the instructions for use (where applicable), the net quantity, the contact information of the manufacturer or distributor/seller, the origin, the alcohol concentration in the case of beverages.

Respondents also suggested improvements to labels such as: Improving the degree of decipherment of information on labels, standardizing the information presented, creating colorful and attractive labels.

In another research conducted over Taiwan consumers, authors have revealed that in case of organic products, the presentation of more information with the label help is beneficial, but cannot

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cause a change of consumers' consumption behavior, who do not have a positive attitude towards this type of products.

Given that there is already a positive attitude and a certain degree of confidence in those products, information on labels on how organic products are obtained, processed and handled, the percentage of organic ingredients in a product, determines the increase of consumers' confidence degree related with this kind of products. [14]

In the case of the research carried out by Niraj Kumar and Sanjeev Kapoor on a sample of 300 young Indian it has been highlighted that consumers have shown considerable importance to the food label and read it carefully before making the final purchase decision for food products. [15]

In addition to the price, all other attributes of products that have implications for the health of consumers were considered to be extremely important by the respondents. These information could be classified into two broad categories, namely: product specifications and product quality. The research also has pointed out the fact that the final decision to buy a product based on the label varies greatly depending on gender, age, food habits, and residence.

Within a field research involving 400 respondents from Serbia, it have been tested their attitudes regarding the presence of legally required information as well as nutritional or nutritional qualities or health-related information on the labels. There has been tested 889 food products and the results are showing that 38.2% of the studied food products have labels that are not fully understandable to the average consumer. [16] In the same time, about 11% of products have no information referring to the series/product batch identification, and 87.4% of products have only basic nutritional information with only 4.6% of products with nutritional claims. It has also been demonstrated that consumers who regularly engage in sports activities have shown a greater awareness of nutritional information. There were no significant statistical differences between smokers and non-smokers as regards their attitudes towards nutritional information. Age and education also play a significant role in ordering nutrition information. The most important nutritional information is the one related to the content of fat followed by the content of sugar and vitamins.

Different studies have been shown that not all the consumers are able to understand fully the entire content that a food label may have within it. More precisely, consumers are having difficulties to correlate the numbers regarding the amount of nutrients with a verbal description. [17]

In the same time, the context of purchase can influence the capacity to retain information from the labels. Thereby the capacity of consumers to retain information from nutritional labels and to select useful information can grow overtime, a study made on New York consumers show that the period of time used to gaze at the nutrition labels is increasing if previously the consumers make a learning type effort with nutritional educational materials.

In order to explain the influence that labeling can have upon consumers behavior, different authors have been used the Theory of Planned Behavior, considering that the behavior is determined by the intention to engage in a particular behavior, the attitude toward the behavior, the subjective norm and the perceived behavioral control.

Thus, in a research made on 795 respondents, the results has been showing that food labeling can explain over 52% of the variance in the purchase behavior of consumers, being possible to correlate the perception upon food labeling with the purchase intention, consumers with high

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positive and greater reliance on food ingredients having more intentions to purchase food that have the proper information and logo within the label. [17]

From the point of view of the importance that nutritional information can play regarding the content of organic food products labels, there are extended studies that are showing that consumers are searching for such information before buying products and are influenced in their decisions in order to consider a particular organic food product healthier or more suited for a diet.

Thus, Gonzalez-Roa and Calatrava-Requena are showing in a research made in 2008 that female consumers are referring to nutritional label more frequent than males' consumer, and people between 22 to 54 years of age using more frequently the nutritional label than people having more than 55 years of age. The same study reports also that more educated consumers are using more frequent information from nutritional label than less educated consumers. [18]

Another study made by Harbor-Locure et al. in 2001 reports that consumers can be split between label users or non-users, and from this point of view label users are more likely to search information about calories, fat, sodium and cholesterol and give less importance to non-nutritional elements from the labels like price and expiry date. [19]

From the point of view of efficiency of nutritional label information, the literature review made by Azaman and Sahak shows that nutrition information presented in front of the package is more effective than back of the package nutritional facts and consumers are preferring to make comparisons only taking account of one nutritional element (eg fat content) instead of many because they can't process the information in real time when they are making their buying decision. [18] The same authors have been synthetized results from previous research regarding the effect of nutritional labels upon the consumer. The results are showing that the nutritional labels do affect the way that consumers are consuming organic food products by changing the perception toward more healthier and nutritive ones.

5. Organic food consumers' behavior

Nowadays food consumption is influenced by a number of different factors like: diversity of food offer, huge number of producers, an important amount of sometimes aggressive promotional programs, well established distribution channels all over the world for the most fresh type food products etc. But the high degree of availability of nutritious food for almost every interested consumer does not automatically lead to a healthy life style, or healthy dietary habits for the mass consumers. [20]

A systematic review of various research over time shows that the majority of consumers across countries and in different periods of time consider food naturalness as being a crucial element- a positive food product attribute.

However, its relative importance is different from a culture to another, crossing countries and history. The perception related with the concept of naturalness is influenced first by the process of obtaining the food and second by its content. People are considering naturalness an abstract construct linked with healthiness, freshness, and organic or locally produced foods. Because this lack of clarity the concept is hard to measure being subjectively quantified according to the individual interpretations for every person. For this very reason also the term is hard to be regulated and interpreted by producers. [21].

Still, the importance of naturalness of food products for consumers can be measured in the form of three different approaches: how the food was grown – the origin of food (consumers are emphasizing the organic characteristics and local farming requirements), the way in which the food is produced and processed (the ingredients used and the type of processing methods), properties of the final food product (seen as properties attributed to healthy food: healthiness, freshness, eco-

friendliness, tastiness). Studies have shown that as we stated above, independent of the country and year of study naturalness was considerably important for consumers. Interesting to note is the fact that older, female consumers are giving more importance to food naturalness than younger males. [21].

Also, consumers that are sharing as values: idealism, tradition, universalism are more preoccupied by food products naturalness than the ones.

Food naturalness importance given by the consumers plays an important role in explaining consumers' willingness/intentions to eat organic food. Also, as a part of consumers' behavior, food naturalness importance is influencing the intention to eat food products friendly for the environment or the negative perception upon new food processing technologies.

Several studies point to the high importance of health as a motivator for organic food consumers. [22]

The degree of health consciousness manifested by individuals plays an important role in the light of organic food consumption behavior. Thus if a high degree of health consciousness occurs, organic food identity of the consumers manifest itself at a higher level and personal values such as self-transcendence, openness to change, self-enhancement, and conservation are manifesting themselves as well. [22]

Social consciousness represents also a variable that can modulate the consumption of organic food. Thus, through organic food consumption, individuals can express their degree of social consciousness, being connected with the concerns regarding their social environment (membership groups and identity groups). As an expression of their behavior, when they are making choices regarding organic food, individuals tend to give more importance to health related motives than to sustainability. Orientation toward health it can be seen as an expression of an egoistic attitude, meanwhile importance granted to sustainability is related with a more altruistic behavior.

The personal values of individuals have an important role in mediating the effect. In the same time women tend to develop a more positive organic food identity than males and younger persons more than the older ones.

The complex process of analyzing consumer organic food behavior has to take into consideration the fact that organic production guidelines and quality of organic foods being variable across countries.

Since organic foods represent something 'new' as compared with conventional foods, consumers with low tolerance for uncertainty/ambiguity may be less inclined to develop a positive organic food identity and to engage in organic food behavior.

Studies have accredited the idea that wellbeing is antecedent for organic food consumption, playing the role of a motivational driver. But, in the same time, wellbeing can be a goal and an effect of organic food consumption. The connection between the organic food consumption and wellbeing can be properly explained through certain different theories. Thus cognitive processes and consumers health belief can conduct to the manifestation of this link. Another effect upon organic food consumption is having emotional automatic processes, with the framework of individuals concerns about health. [23]

Intention to purchase organic food is moderated by the degree of health conscience. The awareness of consumers moderates positively the intention to purchase organic food. The relationship of the subjective norms, perceived behavior control and environment concern with intention to purchase vary across different contexts. Subjective norm also turned out to be a significant predictor of organic food purchase intention and interaction term of the subjective norms was also significant, which implies that increasing the awareness among consumers will lead towards establishing organic food purchase intention as the social norm. [24]

Health conscious consumers are becoming more and more oriented toward organic food in comparison with conventionally grown food. The reasons are related with the high degree of incidence of inappropriate lifestyle type diseases like heart disorders and depression. [25]

When brand reputation is low, reasons for consuming organic food partially mediate the relationship between values and attitude. Values are intrinsic related with reasons for or against the

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consumption of organic food products. When brand reputation is high the reasons for consuming organic food are fully mediating the relationship between values and attitude. [26]

Variables that can segment the organic food market at a national level (the Australian one) are age, income, education, metro/city-vs-rural/region, purchase frequency, weekly expenditure, consumption period, retail outlets, perceived values, self-image, and perceptions about organic foods. [27]

Personality encompasses a diversified range of traits that can be relevant for the way in which individuals feel, think and behave. Taking account by the fact that this traits are very stable along time for the majority of persons, their specific combination can be edifying for the consumer preferences toward organic food products. Within a study made by Bazzani et all, personalities are evaluated using MIDI (Midlife Development Inventory) scale from the point of view of five specific important traits: openness to experience, conscientiousness, extraversion, agreeableness and neuroticism. The results of the study shows that the measured personality traits have been a source of heterogeneity in terms of consumer's preferences toward locally produced food products, while for organic products a certain amount of homogeneity was manifested. [28]

This means that the consumers oriented for organic food products are having stable preferences in general and only in case of the sub sequential category of local products, consumers are behaving differently taking account of their different personality traits.

Food products labeled taking account of the sustainability principles regarding the consumption itself and different governmental programs that are emphasizing the importance of green products consumption are important from the point of view of the relationship that can be built between consumers' intentions and concerns about a sustainable consumption and effects upon natural environment. [29]

The market for green products can be developed only if a sum of factors are met, among them one of the most important being consumers trust related with this type of products. Studies have shown that the lack of consumers trust can be a strong barrier regarding the development of green products market. More specifically, the low level of knowledge and trust regarding certification, control and labeling of organic food can affect the buying decisions. Mistrust regarding the control system of the food and the authenticity of the products sold as organic are having a significant negative impact on the self-reported buying behavior [30]

In terms of consumers perceptions upon organic food products the problem related with the country of origin of the products represents another important element. There has been revealed that, in general country of origin seems to lose from the impact upon consumers when other quality elements are salient for consumers. So, in many situations there is possible that in comparison with conventional food products, organic food products not to be close related with the country of origin issue. [31]

Health related benefits are considered the main common justification for organic food products consumption, correlated with local small farms origin of the products. Other studies have revealed that for organic skeptic consumers there are no health advantage that can justify the high price of organic food products. [32]

There is an opinion among consumers regarding the way in which organic food products are labeled in general that can be known as "clean label" trend. That is referring to the information that products labels can contain with referral of the presence of certain ingredients, or the using of a certain method of production (considered more or less natural). Consumers are judging in a broad sense through assumptions and inference looking at the front of pack label, and in a strict sense through inspection and inference looking at the back-of-pack label. There are a broad range of factors that are influencing consumers in their choices toward three different categories of food products: organic, natural and "clean" products. Among these factors, health represents a major consumer motive, followed by intrinsic and extrinsic product characteristics. [33]

There is a general concern of authorities regarding the promotion of a healthy and environmentally friendly behavior among consumers. From this respect there are four target behaviors considered: reducing overconsumption of food beyond energy needs, reducing

consumption of low-nutrient energy dense foods, eating less animal- and more plant-derived foods, and reducing food waste. Studies revealed that health driven behavior is relatively developed among consumers but not the same thing can be assessed related to the attitude regarding the environment. The targeted behaviors were related to the impact on health excepting the wasting of food. In the same time there was low motivation for eating less-animal derived products and plant based food. [34]

Individuals can be affected regarding their choices related with health products consumption by temporary career shifting and new work conditions accommodation. [35]

In order to change individuals' behavior there should be first a greater emphasis put over the health related motives of consumption and building a constructive attitude over environmental issues secondly.

Choices regarding sustainable food products are influenced by different factors that can segment also consumers. From this respect consumers can be classified in four different segments based on their sustainable food behaviors: unsustainers, curtailers, product-oriented consumers and sustainers. There are differences between segments regarding food choice motives, personal and social norms, food involvement and subjective knowledge on sustainable food. Also the ability to judge how a sustainable product has been produced is differentiated among the above characteristics taking account of socio-demographic segmentation. [36]

Another important issue is related to the extent in which consumers are perceiving natural or unnatural qualities of food products. A research conducted by Evans et all shows that chemical changes are more important than physical changes, more processing of the products are perceived as less natural by consumers. In the same time e-numbers have been perceived less natural than same preservatives described by different chemical and common names. As a result, products that are physically changed, less processed, containing common known ingredients and that are using common names descriptors for ingredients are perceived being more natural by consumers. [37]

Sustainability of food production and consumption is challenged by many factors nowadays like the increase of global population, the consumers developing needs, different changes in consumption models etc. In order to optimize decision regarding agri-food supply chains there can be used different methods, among them the life cycle method and life cycle assessment being preferred. [38]

The consumption of health food is influenced from early stages within the development of the individual personality. Hence, within the social group of the family, parents are having the role to influence and promote different food consumption behaviors. Through active guidance/education, restrictive guidance/education, rule-making, availability, accessibility, pressure to eat, rewarding food consumption, rewarding with verbal praise, parents are actively inducing to their children models of behavior. Results are showing that availability and parental modeling effects show the strongest associations with both healthy and unhealthy food consumption. Other parenting practices are more or less efficient depending to the food consumption context and the age of the child, as for the healthy food active guidance can be more effective and for unhealthy food the restrictive guidance and education is more effective. Three main areas of parental influence of child food behavior are in place: active guidance/education, psychosocial mediators and moderating influence of general parenting styles. [39]

Latest generations have an educational track that is oriented towards green products consumption behavior and social responsibility. [40].Due to this, making choices related to organic food product become more relevant as it is integrated in a wider frame.

The responsible consumption and food safety are inter-related with sustainability in the field of food industry. A study conducted on 18 wine Romanian companies showed that managers in the field do not place sufficient emphasis on sustainability, this issue remaining just a desideratum for them. Machine to machine technologies are considered a proper solution for food quality standards within the industry and a tool to enhance the sustainability of production but the majority of managers are believing that the implementation of these strategies is the prestige of the strong ones, for the other producers generating too high cots, which lead to reduction of competitiveness on the

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domestic and export markets. In the context of the research it was also clear that the food safety through wine consumption does not strictly refer to the maintenance of physical health of the people, the main motivation of wine consumption should not to be alcohol content as in the case with the consumption of poor quality or counterfeit wines, but a series of aspects related to education, culture, civilization, traditions, life style etc. [41]

As a general conclusion, the efforts made by the different categories of actors within the field of organic food production and retail are oriented toward a sustainable model of production and consumption. From this point of view retailers of organic food products have a crucial role in educating consumers and offer them in the same time wide range of alternatives to choose regarding a healthy, sustainable consumption model. [42]

6. Materials and Methods

In order to measure the perceptions of consumers regarding the importance of food products labeling we have developed an online survey type research.

The research has been addressed to consumers both from Romania and Serbia, the main goal of the research being determining the perceptions of urban consumers in relation to food labeling and their influence at the level of purchasing decision process.

The final validated number of questionnaires was 1262 for the Romanian consumers and 373 for Serbian consumers.

As objectives of the research we can highlight: identification of information sources used by consumers regarding labeling issue, determining the type of information that food consumers are interested in appearing on the products label, determining the degree of satisfaction associated with the content of the food products labels, determining the categories of information to be added to the labels, determining the extent to which the purchase decision is influenced by the product label, determining the extent to which consumers are aware of the labeling legislation, identifying consumers' opinions in relation to the degree of protection afforded by Romanian respectively Serbian legislation regarding labels, determining consumers' perception of the correct labeling of food products by Romanian respectively Serbian producers, determining consumers' perception of the correct labeling of food by foreign producers, identifying consumers' views of how food labels have respected the accuracy of the information provided in relation to the actual characteristics of the labeled products, determining the degree of importance of the label for the information search stage within the purchasing decision process, determining the degree of influence of the labels on the choice of the product to be consumed at the place of purchase, identify the degree to which the label can determine consumer loyalty, determining the categories of information that are turning into barriers regarding the final purchase decision making.

Corresponding to the objectives, we can state the following hypothesis to be verified:

Hypothesis H1. From the perspective of the interest shown for food products labeling, women generally denote a higher of interest than men.

Hypothesis H.2. Most consumers are informing themselves from institutional websites and social networks

Hypothesis H 3. Consumers are preferring information on ingredients

Hypothesis H.4. Respondents believe to a large extent that the food labels that can be found on the Romanian respectively Serbian market need to be modified

Hypothesis H.5. The vast majority of respondents find that data on restrictions or contraindications in consumption for certain categories of consumers are missing from the food products labels

Hypothesis H.6. Food labels provide the information needed to make the purchasing decision to a large extent.

Hypothesis H.7. The vast majority of respondents have little information about labeling legislation

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Hypothesis H.8. Most respondents believe that legislation regulating labeling fails to protect the interests of Romanian respectively Serbian consumers

Hypothesis H.9. Respondents consider to a large extent that Romanian respectively Serbian producers are involved in the proper labeling of food products

Hypothesis H.10. Many respondents consider that the product label is very important when they are looking for the necessary information regarding their purchase decision

Hypothesis H.11. Respondents consider to a large extent that the satisfaction of their own needs in terms of food labeling leads to further acquisitions for the products in question

7. Results

The analysis for the research results is made separately for the two samples, with subsequent comparisons being made between them.

As regarding the first question, which has also the role of a filter type question, the percentage of respondents interested in the issue of labeling indicates its importance and the degree of maturity of the consumer in the urban environment. Also exists a correlation between the respondents' sex and the interest shown regarding labeling issue. Women, both for Romanians and Serbs, are more interested than men in this issue.

In the case of Romanian consumers, 64% of the respondents are women who answered positively showing their interest related to labelling of food products. The same, in the case of Serbian consumers, 57% of respondents are women. 93% of Romanian women said yes and 87% of Serbian women are also interested.

Since the measurement of the variables related to the interest for the labeling problem and the gender of the respondents was made using the nominal scales, in order to identify the existence of the correlation, the Chi square test was completed, supplemented with the analysis of the coefficient of contiguity.

As can be seen in the tables below, this association (correlation) exists but it is not very strong for respondents both in Romania and Serbia.

For Romanian consumers, the contiguity coefficient is equal to 0.317 and approximate significance has the value =0.000. In the case of Serbian consumers the contiguity coefficient is equal to 0.280 and approximate significance has the same value =0.000.

Table 1. Chi Square and contiguity coefficient values for Romanian consumers, correlation between gender of respondents and interest shown to labelling issue

Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	140.599[a]	1	0.000		
Continuity Correction[b]	138.382	1	0.000		
Likelihood Ratio	129.411	1	0.000		
Fisher's Exact Test				0.000	0.000
Linear-by-Linear Association	140.487	1	0.000		
N of Valid Cases	1262				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 46.83.					
b. Computed only for a 2x2 table					
Symmetric Measures					

		Value	Approximate Significance
Nominal by Nominal	Contingency Coefficient	0.317	0.000
N of Valid Cases		1262	

Table 2. Chi Square and contiguity coefficient values for Serbian consumers, correlation between gender of respondents and interest shown to labelling issue

Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	31.697[a]	1	.000		
Continuity Correction[b]	30.482	1	.000		
Likelihood Ratio	32.961	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	31.612	1	.000		
N of Valid Cases	373				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 57.84.					
b. Computed only for a 2x2 table					

Symmetric Measures			
		Value	Approximate Significance
Nominal by Nominal	Contingency Coefficient	.280	.000
N of Valid Cases		373	

It can be seen that the hypothesis H1 is partially validated, because there are differences between women and men in terms of interest, but this difference is not significant.

As regarding the sources of information used by the respondents related with food products labelling issue, it has been advanced the hypothesis according to which most consumers are informing on the websites of the institutions in the field and from the social networks.

In order to validate this hypothesis it has been taken into consideration a number of 1152 questionnaires corresponding to Romanian consumers that declare interested by the issue of food products labelling and 352 questionnaires corresponding to Serbian consumers.

Within the table below it can be highlighted the received answers repartition:

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Tabel 3. Sources of information concerning the food products labelling issue

Evaluated attribute	Number of Romanian respondents	Romanian total from the ones that have been answered yes at the first question from questionnaire	Number of Serbian respondents	Serbian total from the ones that have been answered yes at the first question from questionnaire
websites of institutions and / or organizations in the field (ANPC, European Commission etc)	585	50.8%	128	36.4%
Magazines and specialized publications (Market Magazine, Retail FMCG etc.)	226	19.6%	264	75%
Family, friends, colleagues	440	38.2%	-	-
Participate in events in the field (workshops, seminars, conferences, courses etc.)	64	5.6%	328	93,2%
information materials made available by the local government administration	147	12.8%	288	81.8%
social networking sites, blogs specializing in the field	568	49.3%	192	54.5%

From the synthesized table above, we can highlight in case of Romanian consumers that the most used source of information is represented by websites of institutions and / or organizations in the field (ANPC, European Commission etc.), followed by social networks websites and field specialized blogs, family, friends and colleagues, journals and specialized magazines, respectively information materials made available by the local government administration. Events participation is the least used possible source of information for Romanian consumers.

As regarding Serbian consumers, the most important source of information is represented by the participation to events in the field (workshops, seminars, conferences, courses, etc.), followed by information materials made available by the local government administration, and journals and specialized magazines. Next we can see social networks, specialized blogs and at the last place websites of institutions or organizations activating in the field.

Another conclusion that can be drawn regarding the possible correlation between sources of information regarding food products labelling and descriptive variable referring to sex of the respondents points out that in both countries male respondents prefer more than women sources like institutions or organizations websites, journals and specialized magazines. In the same time from the perspective of the same type of correlation women tend to prefer more than man: participation to

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events, informative materials given by local administration, social networks, blogs specialized in the field.

As regarding the validation of hypothesis no3, it can be noted the results synthesized within the following table.

Table 4. Type of information which are of interest for the consumer in order to appear on food products labels

The type of information that food products consumers are interested in appearing on the products label	Number of Romanian respondents	weight	Number of Serbian respondents	weight
the name of the food product	852	74%	152	43.2%
the list of ingredients	1023	88.8%	104	29.5%
substances which cause allergies or intolerance (peanuts, milk, mustard, fish, gluten-containing cereals etc.)	998	86.6%	144	40.9%
the quantity of certain ingredients or ingredients' categories	808	70.1%	192	54.5%
the net quantity of the food product	720	62.5%	216	61.4%
the date of minimum durability or the final consumption date	972	84.4%	152	43.2%
special storage conditions and / or conditions of use	885	76.8%	176	50%
the name or business name and address of the operator or importer;	820	71.2%	248	70.4%
country of origin or place of provenance	911	79.1%	144	40.9%
instructions for use	720	62.5%	200	56.8%
a nutritional statement	666	57.8%	192	54.5%

Analyzing the responses of Romanian consumers, results that the most preferred are: information referring to the list of ingredients, followed by the substances which cause allergies or intolerance, the date of minimum durability or the final consumption date, country of origin or place of provenance, special storage conditions and / or conditions of use, the name of the food product, the name or business name and address of the operator or importer, the quantity of certain ingredients or ingredients' categories, the net quantity of the food product, instructions for use and a nutritional statement.

For the Serbian consumers, the order of preference for the categories of information that should appear on food products labels is referring to: the name or business name and address of the operator or importer, the net quantity of the food product, instructions for use, the quantity of certain ingredients or ingredients' categories, nutritional statement, special storage conditions and / or conditions of use, the date of minimum durability or the final consumption date, the name of the food product, substances which cause allergies or intolerance and information referring to the list of ingredients.

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Thus, hypothesis no3 regarding the fact that information about ingredients represent the category of information that has been preferred by the consumers was validated only in case of the Romanian consumers, the Serbians being sensible to other categories like the name or business name and address of the operator or importer.

Hypothesis no 4, was advancing the idea that consumers from the Romanian and Serbian market altogether consider that labels of food products marketed have to be modified in a great extent.

Responses analysis reveals the validation of this hypothesis because the average score obtained from the measurement using the semantic differential scale is 4, which indicates that the respondents believe that the food labels on the Romanian market should be largely modified. The average score for Serbia is 3,681, which indicates that respondents believe that the food labels on the Serbian market should also have to be modified.

As regarding the H5 hypothesis, the analysis of the results revealed its validation. Thus, in the case of the Romanian respondents, the majority of respondents (79.1%) consider that the information on restrictions or contraindications in consumption for certain categories of consumers (babies, pregnant women, diabetics, etc.) is missing from the labels, followed by 75.6% that it considers that there are missing information regarding additives and other added substances.

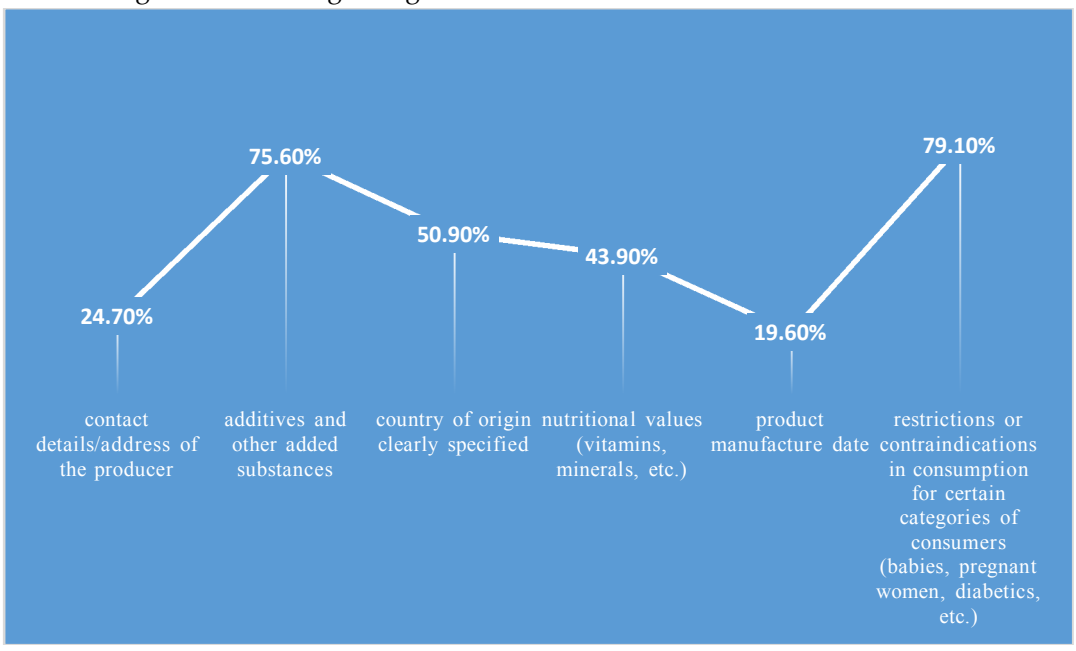

Figure 1. Proportion of consumers regarding opinions about categories of information that are missing from the actual food products labels in case of Romanian consumers

In the case of respondents in Serbia, most of them (86.40%), consider that information about: contact details / address of the producer is missing, followed by (70.50%) that considers country of origin should be clearly specified and (70.50%) that are considering product manufacturing date is the information that is missing.

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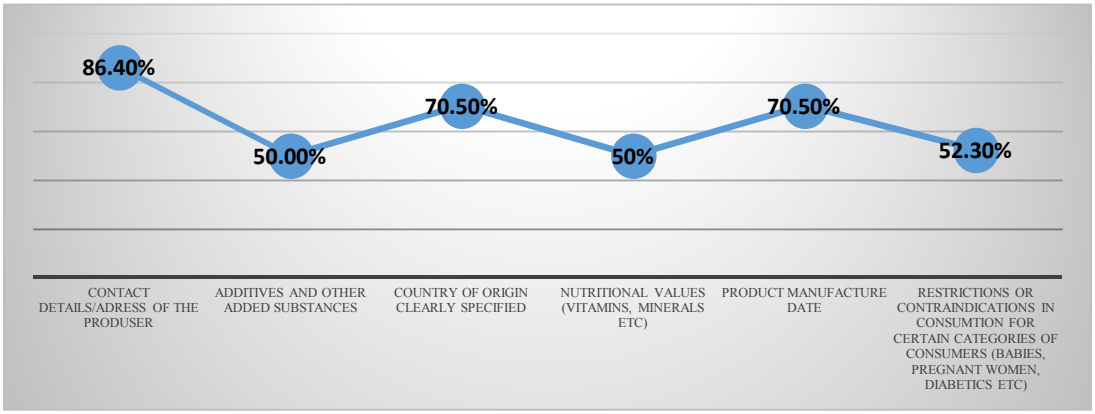

Fig. 2. Proportion of consumers regarding opinions about categories of information that are missing from the actual food products labels in case of Serbian consumers

The H6 hypothesis regarding the extent to which the food labels provide the information needed to make the purchase decision was not validated because the average score obtained for this variable measured by the 5 steps semantic differential scale was 2.889 for the Romanian consumers and 2.886 in the case of Serbian consumers.

Thus, food labels offer only partial information needed for the buying decision in the opinion of both Romanian and Serbian consumers.

Analysis of the data obtained also indicates that there are no gender differences regarding the extent to which the labels provide sufficient information in order for the purchasing decision to be possible. Most women (34%) and men (31%) in Romania chose the response - to a small extent. While the majority of respondents in Serbia, regardless of sex, have chosen the middle of the scale variant – nor-nor.

The H7 hypothesis was validated because the average score of 2.779 for the Romanian respondents and 2.659 for the Serbian respondents regarding the responses corresponding to their opinion about the labeling legislation indicates that the respondents are not aware of the legislation in question.

In case of the Romanian consumers the value of Pearson Chi-Square is 241.964 with a Asymptotic Significance of 0.000, while the values for Serbian consumers are showing Pearson Chi-Square being 12.325 with the same value for Asymptotic Significance of 0.000.

Table 5. Chi Square and contiguity coefficient values for Romanian consumers, correlation between gender of respondents and opinion about the labeling legislation

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	241.964[a]	4	.000
Likelihood Ratio	246.818	4	.000
Linear-by-Linear Association	140.358	1	.000
N of Valid Cases	1152		

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a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 35.24.

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Contingency Coefficient	.417	.000
N of Valid Cases		1152	

This means that men are considering themselves much more informed than women as regarding labelling legislation.

In order to validate the H8 hypothesis, an average score of 2.549 was calculated, indicating that Romanian consumers believe that the legislation currently governing food labeling in the country protects to a small extent the interests of Romanian consumers. The average score for respondents in Serbia of 2,795 points to the same explanation.

Regarding the perception that the legislation regulating the labeling currently protects the interests of the Romanian consumers it can be seen that it differs by gender. Thus, women are more skeptical than men in terms of protection offered by current legislation.

For the Romanian consumers Pearson Chi-Square has value 126.859, with Asymptotic Significance (2-sided) = 0.000 and Contingency Coefficient = 0.315, while for the Serbian consumers Pearson Chi-Square has value 62.672, with Asymptotic Significance (2-sided) = 0.000 and Contingency Coefficient = 0.389.

The H9 hypothesis is not validated because the average score obtained is 2.584 for the Romanian consumers and 2.841 for the Serbian consumers, indicating that the respondents believe that the Romanian food producers are making minimal efforts regarding the proper labeling of their own products, the same situation being characteristic for Serbian food producers as well.

If we try to emphasize the correlation between sex variable and the opinion regarding the degree of producers' involvement in having a proper food products labeling, we can highlight the fact that men are having a greater confidence than women regarding the labeling made by national producers.

In case of Romanian consumers Pearson Chi-Square has value 185.433, with Asymptotic Significance (2-sided) = 0.000 and Contingency Coefficient = 0.372, while for the Serbian consumers Pearson Chi-Square has value 102.560, with Asymptotic Significance (2-sided) = 0.000 and Contingency Coefficient = 0.475.

In the case of H10 hypothesis regarding the importance that products labels can have within the process of searching the necessary information to the purchase decision, the average score obtained is 4,584 for the Romanian consumers (using 5 steps differential semantic scale).

This indicates that the importance given to the food label is very high in relation to the consumer's effort to identify the information needed to make the purchasing decision. The average score of 3.273 obtained in the case of Serbian consumers indicates that they are not given any importance to the label in order to make the purchase decision.

As regarding the validation of hypothesis no11, referring to the extent to which consumers are making repeated purchases for food products those labels are satisfying their informational needs, it can be observed that the hypothesis can be validated for the Romanian consumers as it was obtained an average score of 4,119 for the differential semantic scale type responses.

Thus it can be point out that Romanian consumers are willing to become loyal to product brands that are convincing from the point of view of information offered with the help of their labels.

In case of the Serbian consumers, the average score of 3,045 shows that the respondents are indifferent when it comes to become loyal to some brands according to their labels.

8. Discussion and Conclusions

Taking account of the results of the analysis, and the number of hypothesis that have been validated, the research has shown certain features of the Romanian and Serbian consumers regarding the perception upon labeling issue, importance of different type of information within the process of interacting with the products, attitude regarding labelling legislation and importance of nutritional information regarding the buying decisional process.

The results has shown that there are differences between women and men regarding the interest shown for labelling, women being more interested in general than men. Although the differences are not statistically representative, it can be explained by the fact that women generally are dealing with food products purchasing at the level of functional families with children on one hand and can be more than men preoccupied by the healthy food on the other hand.

From the point of view of sources of information regarding the labeling issue there are significant differences between the two samples of consumers. In case of Romanian consumers there are preferred the websites of institutions or organizations in the field (including European Commission website), social networks websites and specialized blogs, meanwhile Serbian consumers have the participation to events, information materials from local government administration and journals and specialized magazines. Differences are objective because the fact that in Serbian economy, institutions or organizations that are able to regulate this particular issue are not well represented while Romania have different official government and non-government type organizations that are having as a main object of activity labeling of products in general.

The correlation between sex of the respondents and sources of information used regarding labelling are showing that in both countries men are using more websites of institutions and organizations, journals and magazines, while women are using participation to events, informative materials, social networks and blogs. Differences are explained by the way in which women are more oriented generally toward sources of information which suppose interaction and a higher degree of confidence given by others opinion.

Categories of information from the labels that are important to consumers are different for the two samples of consumers. Romanian consumers are interested more about information on list of ingredients, allergenic substances, the date of durability. Serbian consumers are interested more on information regarding the name or business name of the producer or distributor, net quantity of food product, instructions for use. This results are very suggestive for the specific consumption culture features for every nation.

Both type of consumers are considering that food product labels that can be actually found within the market need to be modified. As regarding the categories of information that consumers consider that have to be added, in case of Romanian consumers, information on restrictions or contraindications in consumption for certain categories of consumers and information regarding additives and other added substances are the categories considered. In case of Serbian consumers we can highlight information about: contact details / address of the producer, country of origin and product manufacturing date.

Again this conclusion shows differences related to the consumption culture and the structure of the relationship between economic agents in the two countries.

As regarding the degree in which food producers are implying themselves in the proper labeling of their own products, both type of consumers share the opinion according to the degree of involvement is minimal for the producers.

The issue of labelling is a very complex one, and its importance is given by the fact that the buying decisional process in case of specific categories of products like food type products can be influenced in a great extent by the nutritional information available within the labels.

Differences between different countries, even if they are somehow related geographically and culturally are still present because the different ways in which these economies have been developing themselves over time.

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Petronela performed data analysis and wrote the manuscript. All authors read and improved the manuscript.

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