

SEARCHING FOR AND PERCEPTION OF INFORMATION BY CONSUMERS IN THE LIGHT OF THE SUSTAINABLE CONSUMPTION IDEA — ON THE EXAMPLE OF FOOD MARKETS

POSZUKIWANIE I PERCEPCJA INFORMACJI PRZEZ KONSUMENTÓW W ŚWIELE IDEI ZRÓWNOWAŻONEJ KONSUMPCJI — PRZYKŁAD RYNKÓW ŻYWNOŚCIOWYCH

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ABSTRACT

The aim of this paper is to present the sources of information about food, the cost of collecting the information and the perception of messages by consumers in the light of the sustainable food consumption idea. We used primary materials from a direct, personal survey which were later analyzed with the use of Berelson's content analysis method. We found that a consumer shows low interest in sourcing the information about sustainable food consumption. The most credible, from the consumer's point of view, information about food, consumption and the food market, comes from reports and scientific papers, as well as from the consumers' families or friends. Gathering information is connected with devoting time which we spend on finding the right content. The information connected to environmental issues was the most distinctive for the respondents; other categories of information concerned the waste of food, shopping planning, the direction of changes, personal health issues and the influence of food products on one's health, as well as consumption in connection with recommendations concerning health (among others, in the scope of nutrition, recommendations and specialistic advices). The knowledge of the most credible sources of the information about food consumption, the frequency of acquiring such knowledge, the costs of gathering information and the perception of messages should be reflected in properly chosen communication channels for the promotion of sustainable food consumption. In the research over sustainable food consumption we should focus more on our information needs. The network approach and the perspective of active engagement of consumers in the process of creating innovations in food products give us a new approach for the market analysis, popularization of the idea of sustainable food consumption and let us change some deeply rooted habits and behaviors of consumers. As a result of such engagement, consumers will be more willing to cooperate and trust one another, and thanks to the feeling of social effectiveness, they will be more interested in the development of the sustainable food consumption model and food policy.

Key words: sustainable consumption, education, information, perception, messages

ABSTRAKT

Celem pracy jest zaprezentowanie źródeł pozyskiwania informacji na temat żywności, kosztu gromadzenia informacji oraz percepcji komunikatów przez konsumentów w świetle idei zrównoważonej konsumpcji żywności. Wykorzystano materiały pierwotne pochodzące z badania ankietowego wykonanego techniką bezpośrednich wywiadów osobistych, poddając je analizie merytorycznej z wykorzystaniem analizy treści rozwiniętej przez Berelsona. Stwierdzono, że konsumenci wykazują niskie zainteresowanie poszukiwaniem informacji z zakresu zrównoważonej konsumpcji żywności. Z perspektywy konsumentów najbardziej wiarygodne informacje na temat żywności, konsumpcji i rynku pochodzą z raportów i opracowań badawczo-naukowych, od rodziny lub znajomych. Gromadzenie informacji wiąże się z poświęcaniem czasu na znalezienie interesujących treści. Informacje związane z troską o środowisko najbardziej zapadły w pamięci badanych; inne dotyczyły np. marnotrawstwa żywności, planowania zakupów, zdrowia człowieka. Wiedza o wiarygodnych źródłach informacji na temat żywności w oczach konsumentów, częstotliwość jej poszukiwania, koszty gromadzenia i percepcja komunikatów powinna być odzwierciedlona w odpowiednio dobranych kanałach komunikacji na potrzeby promocji idei zrównoważonej konsumpcji żywności. W badaniach nad zrównoważoną konsumpcją żywności należy poświęcić więcej uwagi potrzebom informacyjnym. Nową perspektywę dla analizy rynku, popularyzacji idei, zmiany zakorzenionych przyzwyczajzeń i zachowań konsumentów stwarza podejście sieciowe, perspektywa aktywnego zaangażowania konsumentów w proces tworzenia otwartych innowacji, kreacji żywności. W wyniku takiego zaangażowania konsumenci będą czuli się skłonniejsi do współpracy i zaufania, a mając zwiększone poczucie skuteczności społecznej, będą bardziej zainteresowani rozwojem modelu zrównoważonej konsumpcji i polityką żywnościową.

Słowa kluczowe: konsumpcja zrównoważona, edukacja, informacja, percepcja, komunikaty

JEL: D12, D13, D83, D91, M31

Introduction

One of the key elements of both the EU and the country's food policy is to keep high quality of food offered to the market (when it comes, for example, to nutrition and safety) (Pawlak, 2016) and to ensure that food products are produced in a sustainable way. That element reflects a practical implementation of the sustainable development conception¹, a postulate aimed at introducing changes in production and taking actions in order to develop some alternative, more sustainable practices. The said issue, apart from changes in production, influences also changes in food and nutrition, including consumers' interest in the model of the sustainable

food consumption and diet. It can be an answer for, *inter alia*, the problem of obesity (even among kids), the lack of microelements, nutrients, the problem of undernourishment, as well as other challenges connected with them both in Europe (WHO, 2018) and in Poland².

Sustainable consumption³ is a conscious, optimal and responsible use of available natural resources, goods and services on different levels (individuals, households, communities, local groups, business environments, local governments, country's official government and international organizations) (Balderjahn, Hüttel, 2019; Cerria, Thogersen, Testab, 2019; Lewandowska et al., 2018; Stanszus et al., 2017). The idea of sustainable food consumption cannot be only a theory. Market's participants, especially consumers, should understand it and decide to follow the relations and connections that exist between natural environment, economy and society. We should develop an education system aimed at common understanding of values. It is also necessary to make people aware of the relations between the quality of life and right and healthy relations between people and nature. It is necessary to formulate guidelines and to take actions which will allow us to further implement the sustainable consumption principles and create space for cooperation between scientists and governments, as well as governmental and non-governmental organizations. Only cooperation and strong relations build with a longer perspective in mind will allow market participants to acquire the natural skills of developing practices that help to rise interest in the sustainable food consumption and create a sustainable society. The issue of consumers' behaviors on food markets with regard to the idea of the sustainable food consumption is part of an innovative direction of research (Cerria, Thogersen, Testab, 2019; Richter, Thogersen, Klöckner, 2017). We are currently seeing the forming trend and looking for its conditions (Goryńska-Goldmann, Adamczyk, Gazdecki, 2016; Goryńska-Goldmann, 2019b).

Consumers are more interested in parameters and features of food products before they decide to buy them. They try to filter some information and sources of information, check products and compare them. Such behaviors show the significance of information needs and efforts aimed at satisfying those needs by consumers (Gazdecki, Goryńska-Goldmann, 2019). In the age of the Internet and constantly growing

databases, groups of information are growing (Èervenka et al., 2018) also very quickly what causes the searching of information to be time-consuming. Our notice can be attracted also by the costs that consumers have to bear in connection to the selection of information and the right interpretation of information in order to gain valuable insights (they are characterized, *inter alia*, by adequacy, completeness, currency and credibility). Those elements are specific for the process of searching for the information necessary for the buyer (on the way to recognize and realize needs), who, with the help of selected data, can make decisions. Public interest in the conception of the sustainable consumption and engagement of that idea to wider scope of activities promoting health and healthy food, demands taking promotional actions which will allow to increase the efficiency of market initiatives and will bring some advantages (environmental, economic and social). In order to ensure that we have to know exactly what communication channels are used by consumers, what kind of information about food they are looking for (in order to satisfy their needs and the needs of their households' members), and what kind of costs will they have to bear. On the basis of such kind of information, it will be possible to list tools used for marketing communication about the sustainable food consumption that allow to increase the interest of customers and promote more sustainable attitudes, as well as increase the effectiveness of the messages. The aim of our paper is to present the sources of information about food, the cost of information gathering and the perception of messages by consumers in the light of the sustainable food consumption idea.

The theory of social communication and social attitudes in the light of the sustainable food consumption promotion

The process of the implementation of the sustainable food consumption idea is inseparably connected to not only the need of tracking documents needed for the creation of the right conditions, planning and implementation of informational and promotional activities, but also for their assessment on the way to achieve a given result (*inter alia* in the

context of usefulness, effectiveness and stability of the actions taken). It demands defining some theoretical conditions, which are fundamental for such type of research. The theoretical basis for the discussed issue is the theory of social communication and the theory of social attitudes. Each individual, according to the theory of social attitudes, has got a relatively stable tendency to react in a given way for actions or behaviors of others (people, social groups), as well as for different events and circumstances, taking into account also different values (both material and non-material) (Aronson, Wilson, Akert, 1997; Wojciszke, 2003). Such attitude consists of three components, which are related to its core (the cognitive, emotional and behavioral component). This paper refers to the cognitive and behavioral component. We analyzed consumers behaviors in relation to different information sources and the perception of messages that appear in their environment with the idea of the sustainable food consumption, as well as the amount of time spent on searching for information. It allowed us to determine the costs of information gathering. Direct contact between consumers and the information about food, consumption and the food market result in adapting specific attitudes towards those information, their sources, credibility and content.

In the process of social communication, in its classical perspective, the main participants are a sender and a recipient of messages, and the whole process takes place in a defined context and is determined by specific conditions (the sender, the recipient and the rest of market participants that can influence their decisions). The process of communication is analyzed on different levels, *inter alia* cultural, time, economic and social. Within the process of communication are defined the main parts of it, *i.e.* 1) a message (its content and information), 2) chosen communication channels and supplementing channels, 3) coding (the information contained in the message and chosen communication channels) and 4) decoding (the message decoded by the recipients). The recipient's answer creates a feedback. The sender, because of the decoding mechanism, should know and take into account those mechanisms in order to reduce "information noises".

Research method and material

While working on this paper we used both the results of our own research, as well as the results from other authors' research, and supplemented them with our own knowledge and experience. We used the desk research method and the basis material comes from a survey conducted with the use of personal interviews method at the Poznan University of Life Sciences' Department of Economics and Economics Policy in Agribusiness in 2017 by Goryńska-Goldmann i Czechorowski, entitled: *Analiza źródeł i kosztów pozyskiwania informacji oraz percepcja komunikatów w obszarze zrównoważonej konsumpcji żywności (The Analysis of Sources and Costs of Information Gathering and the Perception of Messages in the Area of the Sustainable Food Consumption)*. The tested sample was chosen with the non-random, quota method. The survey was conducted among 433 inhabitants of the Greater Poland Voivodeship; the structure of the sample was defined on the basis of the general structure of the society, trying to make them as similar as possible⁴.

In order to identify the sources of information gathered by consumers about food and to determine the cost of information sourcing we asked the following questions: "Are you looking for the information about food, consumption and food market" (closed question), "If yes, please list the information that you are interested in?" (open question), "How often do you get the information (e.g. read articles, watch TV programs, listen to the radio) about food, consumption and the food market?" In the questions regarding the frequency of information sourcing we used the following scale: ("every day", "2–3 times a week" "4–5 times a week", "once a week", "2–3 times a month", "once a month", "less frequently"). In the further part of the survey, the respondents were asked to rate the credibility of the given sources of the information about food, consumption and the food market (closed question). The task of the respondents was to think about every single source of information and to rate its credibility. Thanks to such approach, we were able to rate the credibility level on a scale from 1 to 5, where 1 means "unreliable", and 5 "totally reliable" (1 — unreliable, 2 — dubious reliability, 3 — rather reliable, 4 — highly reliable, 5 — totally reliable). On the basis of the

answers we were able to get the arithmetic average. The information about the cost of the time devoted by consumers were gathered on the basis of the question: "How much time do you spend, on one occasion, on searching for such information — please define it in minutes" (open question). The results underwent further analysis and the differentiation of the values of different sources' credibility and the cost of information sourcing was verified. In order to determine the perception of the sustainable food consumption we used a closed question: "Did you come across any information about the sustainable food consumption during the last year?". Then we asked an open question: "What do you remember from that information?" Open questions allowed the respondents to freely express their opinions and helped us to gain knowledge about them. In order to analyze the content, we used the content analysis⁵ method, developed by Berelson⁶ (Lisowska-Magdziarz, 2004).

The results of our own research: the sources of information about food, consumption and market, as well as the assessment of their credibility

Taking actions by market's participants (companies, institutions, state authorities) in the area of choosing the right communication channels used to communicate with consumers, demands understanding of the types of information that a consumer needs in order to make market choices aimed at satisfying his or her own needs and the needs of other household members. Precise identification of consumer's information needs is one of the conditions necessary to improve the effectiveness of communication. The results of our own research show that only one-third of the respondents are interested and actively take part in searching for the information about food, consumption and the food market. From the consumers' perspective, the biggest interest in the above-mentioned information concerned the products influence on health (35% of respondents), nutritional and energy value (22%) and ingredients (20%).

Significant was also the origin of products, their character, way of preparation and usage, price, as well as issues connected with ecology and diet. Little attention was put to the information concerning the quality of products (e.g. certificates, symbols, marks confirming the high quality of products), data about GMO or the fact of processing the products and information about their expiry date. An extended set of information is a proof of contacts between consumers and other market participants regarding the information about food and consumption. Consumers who have knowledge about their information needs, with regards to the food market, and who define their own needs should be called "informed consumers". For example, women and people who have higher education, living in relatively good financial conditions, are especially concerned with the health issues. While looking for the information, women put more attention to the issues connected with diet and ecology. In contrast, men place a little bit more attention to prices of products, the way that products are prepared and used. Health issues are more important for people aged 35–44; the situation is different when it comes to the nutritional and energy value — it is more interesting for people aged 18–24.

Another important issue in the process of sourcing information is the credibility. While rating the credibility of different sources, the respondents showed that the most credible information about food, consumption and the market comes from reports and scientific papers (43% of the respondents said that such information is totally reliable and another 43% said that it is highly reliable) and from family members (20% of the respondents said that such information is totally reliable and 42% said that it is highly reliable) or friends (10% of the respondents said that such information is totally reliable and 32% said that it is highly reliable). Only 1% of the respondents when it comes to the family, and 3% when it comes to friends, rated the information as unreliable. The results show how powerful the word-of-mouth marketing is, as it helps to reach people directly through recommendations and word-of-mouth messages. Nearly one-fourth of the respondents considered knowledge from magazines or the Internet to be totally reliable or highly reliable. The same number of people doubted the credibility of such sources of information (respectively 24% and

25%), and 8% of people said that such sources of information are unreliable. The sources like newspapers, radio or television were appreciated by one out of seven respondents; around 30% of respondents doubted their credibility (Table 1).

Table 1. The credibility of different sources of information about food, its consumption and the market

Sources of information	5 — totally reliable, 1 — unreliable					Average
	5	4	3	2	1	
Reports and scientific papers	43%	43%	10%	3%	1%	4.3
Family	20%	42%	29%	8%	1%	3.7
Friends	10%	32%	38%	17%	3%	3.3
Magazines	4%	26%	38%	24%	8%	2.9
The Internet	1%	27%	39%	25%	8%	2.9
Radio	1%	16%	47%	29%	7%	2.8
Newspapers	1%	18%	42%	31%	8%	2.7
TV	1%	16%	41%	30%	12%	2.6

Source: author's own study based on the survey.

The results of our own research: the cost of information gathering

Searching for information is inseparably connected to the costs of time that a consumer has to spend on looking for the right information. The question about the frequency of searching for the information concerning food, consumption and the food market showed that one-fifth of the respondents is looking for it once a week (21% of the total answers given) and one-seventh of the respondents is looking for it 2–3 times a week (around 15%). Nearly 20% of the respondents could not say how often they search for the information. Not many people search for the information from the food market every day — such answer was given only in the case of 2% of the respondents. The results show that the respondents only once a week or once every 2–3 days search for the information. The survey also proves that despite an easy access to different sources of information, the

consumers not very often and not very intensively search for the information about food, the market and consumption what is not a positive fact and should be changed in the future.

In the context of gathering the information concerning food, consumption and the market, very important is time that has to be spent on sourcing such information. The respondents were asked about the average time they spent on searching for those information. The results showed that 87% of the respondents were able to answer that question (13% said that they do not look for such information). Among people that filter information regarding food, consumption and the food market, the average time spent on searching for the information was a little bit over 30 minutes (while the maximum time was 180 minutes and the minimum time was 2 minutes).

While I was analyzing the results from the perspective of the respondents' gender, I noticed, that both men and women on average spent the same amount of time on searching for the information about food, consumption and the food market; and at the same time women are more likely to extend that time to even 3 hours. People aged 18–24 search for such information more often: 2–3 times a month, 2–3 times a week or once a week. Young people also spend more time on sourcing the information about food than older people (aged 45–65). People aged more than 55 were not interested in searching for the information. Elderly people (65+) spend on it the least time, on average 0.5 hour, but not more than 1 hour. People with intermediate or higher level of education search for the information once a week. The highest amount of time spent on searching for information was in households consisting of 3 and 4 people (35 minutes), while the least time was spent in families of 5 or more people (25 minutes). The respondents that describe their financial conditions as "neither good nor bad" spend less time on searching for the information about food than people living in good conditions.

The results of our own research: perception of marketing messages connected to the idea of the sustainable food consumption

The results of the research showed that 4/5 of the respondents have never come across any information concerning the idea of the sustainable food consumption. Only one-fifth of the respondents (22%) declared that they have seen messages concerning sustainable food consumption. Taking into consideration the gender of the respondents, we can assume that the group mostly interested in such information were women living in relatively good financial conditions. People with higher education who live in good conditions search for the information about the sustainable food consumption most often.

In order to deepen the analysis, the respondents interested in the sustainable food consumption were asked to answer a question concerning the facts that they remembered from the provided information. The results show that the average number of remembered information was 1.4, what may mean that the respondents focused on the most important issues from their perspective. The information concerning the environmental issues was the easiest to remember (they consist of 28% of the whole answers provided), and included information about the protection of the environment, waste segregation, recycling, protection of nature and solutions from municipal or urban engineering. The next perceived messages concerned: 1) food waste issues (including high level of food waste and the need to reduce it); 2) shopping planning (including the right shopping planning when it comes to the relations between needs and the number of products); 3) changes and their direction (including increase in consumption, high prices of ecological food, low share of ecological goods in the overall food consumption, collaborative consumption); 4) human health and the products' influence on our health (including the connection between nutrition and health issues, the issue of healthy food products, the need to take care of health and information about balanced diet); 5) consumption in relation to the nutrition recommendations (*i.e.*: information about the number of ingredients and their composition, times of eating, the share of fruit and vegetables in one's diet); 6) stricter consumption recommendations (avoiding products containing lactose,

focusing on the consequences of individual choices). Interest in such issues was confirmed by one-eighth of the respondents. Among other information, gathered or searched for not as often as the information mentioned above, were the ecological aspects, range, and character of the packaging.

The analysis of the marketing messages in connection to the idea of sustainable food consumption led to a conclusion that such type of information were easier to remember for women than for men. When it comes to the age groups (in comparison with other groups), the young (18–24 years old) remembered the information about shopping planning and connection between consumption and nutrition recommendations, people aged 25–34 were more interested in environmental issues, the direction of changes and issues of consumption and ecology, while people aged 35–44 were interested in food waste. The respondents with higher education level and living in better financial conditions were more likely to remember the above mentioned categories of information connected to the sustainable food consumption.

Undoubtedly, the information about health and environmental issues are the most important kinds of information for consumers. Nevertheless, it should also be mentioned that the quality of life, as well as the pace of development of production and distribution of goods and services and some economic issues of socio-economic development (their changes) play the key role in the development of food consumption and improvement of the quality of life. From an international and domestic perspective, as well as from the point of view of the smallest consumers (*i.e.* individuals and their households), taking actions aimed at improving the quality of life may be a long-term task that starts from every person's attitude or a social need when it comes to the whole society. An increase in the consumers' awareness as a result of their experiences (*inter alia* connected with availability of food products rich in preservatives and food adulteration), and the awareness of the depletion of resources (*e.g.* energy) in the world make people focus on the need to search for the information about a new way for both production and consumption, including a modern model of food consumption that would provide tasty and healthy food. Rising people awareness of social, economic, environmental and healthy advantages should increase the interest in the sustainable food production and

sustainable products. For example, Young, Hwang, McDonald, Oatest (2010) noticed that 30% of consumers express worries about environmental issues, but only 5% turn that worries into actions. Shrinking the gap between the "attitude/plan" and the "real consumers' behavior" is a challenge of practical and theoretical matter in the light of huge diversification of market's participants that want to encourage consumers (Barnett, Cloke, Clarke, Malpass, 2010) to take actions leading to some more sustainable results.

Food production and industrial processing should engage in creating open innovations while building market networks and connections between entities, and actively incorporating consumers in the development of the idea. It creates a new perspective for the analysis of the food market and the network approach becomes an important theoretical structure for the scientific research (Gazdecki, Goryńska-Goldmann, 2019). It is worth to further develop practices allowing to incorporate consumers into the food creation process which results in creating new, more sustainable conceptions of food products or services, introduced to the market by food producers. Such approach will allow us to faster implement the sustainable consumption model and change deeply rooted habits of consumers. Cooperation between many participants (*inter alia* producers, trade companies, scientists and consumers), exchange of experiences and knowledge help to develop product innovations that are really likely to come into life.

Informed consumers, as a group of citizens able to spread information among other groups, *e.g.* their family and friends, create good conditions to overcome the, so-called, "gap between attitude and behavior" in the scope of the sustainable consumption and development barriers, including the time, organizational and social barrier). After joining a group of consumers and trying to implement more sustainable practices, the citizens who rely not only on regulations but also on other, closer sources of information (*i.e.* family and friends recommendations), should be more open to change their behaviors connected to food consumption. They will be more likely to cooperate and trust others, and thanks to the improved social effectiveness, they will be more interested in the sustainable food idea and the food policy development.

Limitations concerning the carried out research

Despite the unquestionable value of the presented research results, they have some limitations as a source of scientific evidence. One of the limitations of the carried out research was the scale of credibility applied. Two of the accepted answers (1 — unreliable, 2 — dubious reliability) are of negative character, while three other answers (3 — rather reliable, 4 — highly reliable, 5 — totally reliable) are positive. That certainly influenced the results. Moreover, it cannot be changed in the presented studies. It seems necessary to apply one neutral answer in case of using the Likert scale (5 or 7) in the future.

Another thing that may rise concerns is whether the answers of the respondents about the time spent on searching for information are reliable due to some objections, including whether they have access to historical behaviors and if they are generally aware of the fact when they are searching for information, in what situations they do it and how much time they actually spend on it. One may be afraid that the reliability of the respondents' declarations on these subjects is very limited.

Conclusion

The knowledge of the credible sources of information about food, the frequency of searching for such information, the costs of gathering information and the perception of messages should be reflected in correctly chosen information channels for the need of promoting the sustainable food consumption idea, from the consumers perspective:

- the most credible sources of information about food, consumption and the market are reports and scientific papers, as well as friends and family members;
- searching for information is inseparably connected to bearing some costs, as we have to devote our time to find interesting content; one-fifth of the respondents filter the information about food, consumption and the market once a week, and one-seventh of them search for the information 2–3 times a week, usually spending on that activity over 30 minutes;

- the information connected to the environmental issues was the easiest to remember for respondents and included such aspects as the environment protection, waste segregation, recycling, respect for the nature and municipal or urban engineering solutions;
- those marketing messages that were easily remembered in connection with the idea of the sustainable food consumption concerned also the problems of food waste, shopping planning, the direction of changes, personal health issues and the influence of food products on one's health, as well as the consumption in connection with some recommendations concerning health.

The awareness of our influence on the environment, the knowledge about the vulnerabilities of the environment and the care for ecology are issues that rise our interest and which are necessary to further build communication focused on promoting the sustainable food consumption idea. We should try to provide wider access to the information about the sustainable consumption, *inter alia* by gathering the information about good practices of consumers, food waste, shopping planning and the direction of changes in the current consumption model, the value of health and the influence of food products on our health, as well as the connection between nutrition and different recommendations, *e.g.* regarding nutrition, consumption and other specialistic recommendations.

It is worth to focus more on the sustainable food consumption and consumers needs regarding information because of the potential of such research, especially in the scope of cognitive and emotional processes and the possibility to stimulate discussion about the issues driving routine consumption practices. Not many people know what is the sustainable food consumption and what kind of information allow to obey the rules of it in order to draw benefits for consumers and the society as a whole.

We need to increase the customers' awareness towards food consumption. Educating people about the sustainable food consumption should for example include the element of stress reduction (because of wrong, improper eating practices and the lack of knowledge about them), based on our awareness, the development of different programs, as well as promoting values with the use of the electronic sources of information.

Capabilities of a given country and economy to create open conditions for innovations and successful introduction of them to the market will

influence the pace of development of the sustainable food consumption model. An important role plays the marketing communication system which allows to present the idea and the right solutions, as well as to educate the society with the use of the right communication channels, informational and educational instruments and by organizing events that promote the idea and provide information about it.

Footnotes

¹ Report: Realizacja Celów Zrównoważonego Rozwoju w Polsce (Implementation of the sustainable development goals in Poland) (2018). Retrieved from: http://unic.un.org.pl/files/259/Polska_VNR_20180615.pdf (17.09.2019).

² <http://www.izz.waw.pl> (20.10.2019).

³ The meaning of the "sustainable consumption" idea and the knowledge about the issue have been developing since the United Nations Conference: The Environment and Development in Rio de Janeiro (so called "Earth Summit") during which one hundred seventy-nine governments signed the Agenda 21 (UN) (Hinton, Goodman, 2010), and where the term was used for the first time (1992) (Schrader, Thøgersen, 2011). During the summit it was pointed out that the condition of our environment has been worsening and the differences between social welfare increasing, what is caused by non-balanced consumption and production. The participants agreed on the need to increase the sustainable consumption but did not fully defined the term. The full definition of the sustainable consumption: "the use of services and related products which respond to basic needs and bring a better quality of life while minimizing the use of natural resources and toxic materials as well as emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardize the needs of future generations" was introduced later, during the Nordic Roundtable in Oslo (Norwegian Ministry of the Environment, 1994). On the basis of international papers we should confirm, that it is the most popular definition, despite being from time to time criticized (Di Giulio, Fischer, Schäfer, Blättel-Mink, 2014). Tasks and actions posing a challenge for the idea of the sustainable consumption can be found in the draft document of the European Commission "Roadmap to a Resource Efficient Europe" (2011) (https://ec.europa.eu/environment/resource_efficiency/about/roadmap/index_en.htm, 21.10.2019).

⁴ Because the paper is an another publication focused on consumers' behaviors on the market in the context of the sustainable food consumption, based on research from 2017, the detailed description of the structure of the population sample and the profile of the respondents were presented in the article by Goryńska-Goldmann (2019a and 2019b).

⁵ While creating the key we used the emergent technique in which categories are created only on the basis of gathered empirical data (Wimmer, Dominick, 2008) that were prepared after gathering spontaneous answers of the respondents. The final key consisted of 11 categories. The content analysis allowed to define consumers' attitude by the analysis of the answers.

⁶ The detailed description of the method was presented in the paper (Goryńska-Goldmann, Poloreczki, 2018).

References

1. Aronson, E., Wilson, T., Akert, R. (1997). *Psychologia społeczna. Serce i umysł*. Poznań: Zysk i S-ka.
2. Balderjahn, I., Hüttel, A. (2019). Why Consumers Buy Sustainably: The Role of Personal Values. *Journal for Research and Management*, 41(1), 24–38. DOI: 10.15358/0344-1369-2019-1-24.
3. Barnett, C., Cloke, P., Clarke, N., Malpass, A. (2010). *The Political Rationalities of Ethical Consumption*. Oxford: Wiley.

4. Cerria, J., Thøgersen, J., Testab, F. (2019). Social desirability and sustainable food research: A systematic literature review. *Food Quality and Preference*, 71, 136–140.
5. Červenka, P., Naščáková, J., Bednářová, L., Daneshjo, N., Dudáš-Pajerská, E. (2018). *Development Tendency Testing and Success of Marketing Communications*. 16th International Conference on Emerging eLearning Technologies and Applications (ICETA), 87–92. DOI: 10.1109/ICETA.2018.8572144.
6. Di Giulio, A., Fischer, D., Schäfer, M., Blättel-Mink, B. (2014). Conceptualizing sustainable consumption: Toward an integrative framework. *Sustainability: Science, Practice & Policy*, 10(1), 45–61.
7. Hinton, E., Goodman, M. K. (2010). Sustainable consumption: developments, considerations and new directions. In: M. R. Redclift, G. Woodgate (Eds), *The International Handbook of Environmental Sociology* (245–261). London: Edward Elgar.
8. Gazdecki, M., Goryńska-Goldmann, E. (2019). The system of interorganizational linkages in agri-markets. W: *Relationship, Interactions and networks in Competitive Environments*. 35th Annual IMP Conference. Paris: IÉSEG School of Management.
9. Goryńska-Goldmann, E. (2019a). Barriers to the development of consumption sustainability: The consumers,, perspective on the food markets. In: P. Jedlicka, P. Maresova, I. Soukal (Eds), *Hradec Economic Days*, 9(1), 243–251. Hradec Kralove: University of Hradec Kralove.
10. Goryńska-Goldmann, E. (2019b). Disadvantageous behavior for achieving sustainable food consumption according to consumer opinions. *Annals PAAAE*, XXI(3), 102–111. DOI: 10.5604/01.3001.0013.4084.
11. Goryńska-Goldmann, E., Poloreczki, Z. (2018). Consumers perception of risks to the development of sustainable consumption. *Handel wewnętrzny*, 4(375), 101–109.
12. Goryńska-Goldmann, E., Adamczyk, G., Gazdecki, M. (2016). Awareness of sustainable consumption and its implications for the selection of food products. *Journal of Agribusiness and Rural Development*, 3(41), 1–8.
13. Lewandowska, A., Witczak, J., Giungato, P., Dierks, Ch., Kurczewski, P., Pawlak-Lemanska, K. (2018). Inclusion of Life Cycle Thinking in a Sustainability-Oriented Consumer's Typology: A Proposed Methodology and an Assessment Tool. *Sustainability*, 10(6).
14. Lisowska-Magdziarz, M. (2004). Analiza zawartości mediów. *Przewodnik dla studentów*. Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego.
15. Norweskie Ministerstwo Środowiska. (1994). *Report from the Oslo Ministerial Roundtable Conference on Sustainable Production and Consumption*. Oslo.
16. Pawlak, K. (2016). Food security situation of selected highly developed countries against developing countries. *Journal of Agribusiness and Rural Development*, 2(40), 385–398. DOI: 10.17306/JARD.2016.42.
17. *Realizacja Celów Zrównoważonego Rozwoju w Polsce* (2018). Retrieved from: http://unic.un.org.pl/files/259/Polska_VNR_20180615.pdf (17.09.2019).
18. Richter, I., Thøgersen, J., Klöckner, Ch. A. (2017). Sustainable seafood consumption in action: Relevant behaviors and their predictors. *Sustainability*, 9(12). DOI: 10.3390/su9122313.
19. Schrader, U., Thøgersen, J. (2011). Putting Sustainable Consumption into Practice. *Journal of Consumer Policy*, 34, 3–8.
20. Stanszus, L., Fischer, D., Böhme, T., Pascal, F., Fritzsche, J., Geiger, S., Harfensteller, J., Grossman, P., Schrader, U. (2017). Education for sustainable consumption through

- mindfulness training: Development of a consumption-specific intervention. *Journal of Teacher Education for Sustainability*, 19(1), 5–21. DOI: 10.1515/jtes-2017-0001.
21. WHO (2018). *World health statistics 2018: Monitoring health for the SDGs, sustainable development goals*. Geneva: World Health Organization.
 22. Wimmer, R., Dominick, J. (2008). *Mass media. Metody badań*. Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego.
 23. Wojciszke, B. (2003). Postawy i ich zmiana. In: J. Strelau (Ed.), *Psychologia. podręcznik akademicki, tom 3 — Jednostka w społeczeństwie i elementy psychologii stosowanej*. Gdańsk: Gdańskie Wydawnictwo Psychologiczne.
 24. Young, W., Hwang, K., McDonald, S., Oates, C. J. (2009). Sustainable consumption: Green consumer behaviour when purchasing products. *Sustainable Development*, 18(1), 20–31. DOI: 10.1002/sd.394.

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