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DISADVANTAGEOUS BEHAVIOR FOR ACHIEVING SUSTAINABLE FOOD CONSUMPTION ACCORDING TO CONSUMER OPINIONS

Key words: sustainability consumption, consumers, behavior, food market

ABSTRACT. The purpose of the article is to specify behavior considered to be disadvantageous for achieving sustainable consumption by consumers. Sustainable consumption, in economics usually derived from the consumer usefulness theory, is, on the one hand, inseparably linked to the effectiveness of a food supply chain, and on the other, a phenomenon significantly less identifiable and much more difficult to verify. In research, factual material gained through a personal interview survey, conducted in the Greater Poland Voivodship was used. Respondents were chosen with the use of quota and purposive sampling. It was found that consumers are able to see some behavior that are unfavorable for achieving sustainable consumption. The average level of unfavorable behavior (2.25) proves that consumers see such behavior with a relatively low level of disadvantages for achieving sustainable food consumption (in the economic, ecologic and social aspect). Consumers see unfavorable behavior for achieving sustainable consumption as behavior of a low level of disadvantages, including behavior stemming from the cost of moving from a previous model to a sustainable model, which demands spending more time on planning and shopping and creates a need to control personal behavior in terms of shopping logistics, i.e. planning, organizing, storing, buying and consuming products, as well as waste disposal. A very low level disadvantage of achieving sustainable food consumption is connected, according to consumers, with some behavior demanding self-control and self-discipline (e.g. avoiding excessive, disadvantageous consumption), engagement in the life of the local society and spending more time on looking for local products (in order to exchange, borrow, share and foster the community). Information concerning behavior unfavorable for achieving sustainable food consumption can be used for planning and implementing actions aimed at disseminating the idea and increasing consumer awareness.

INTRODUCTION

With the theoretical diagnosis and practical implementation of the sustainable development concept in Poland [Czyżewski, Klepacki 2015, Borys 2014, Poskrobko 2010, Kielczewski 2008, Zrałek 2016, Pocztas-Wajda, Sapa 2019, Zalega 2018], there are some efforts aimed at identifying changes happening both in production, as well as consumption spheres. There are attempts to identify the transformation level of actions taken by subjects in those areas, from introductory and unsustainable action, to some more sustainable undertakings. It complies with the opinion that a new stage, the so called sustainability...
revolution, in the socio-economic development of the world has started [Kramer 2011, Jaros 2016, Reisch et al. 2016, Lorek, Fuchs 2013, Prothero et al. 2011], which focuses, inter alia, on issues of sustainable consumption (including food consumption). The report: World Business Council for Sustainable Development [WBCSD 2008] highlighted the need for some global changes in terms of a food consumption structure and model. The importance of this issue is proved by the fact that it is considered as one of the four strategic areas of the road map concerning a transformation towards a circular economy [EC 2019].

Changes observed on a global scale indicate that the population count will continue to increase. It will result in an ever growing role of food markets. In the experience of developed countries, the growing wealth of societies increases the consumption level [Rada Ministrów 2018], resulting in overconsumption over time [Ritzer 2012]. That problem is also present in the case of societies of developing countries, which are at a relatively low income level, have a poorly developed agriculture and often have to face problems of hunger and malnutrition [Pawlak 2012]. In Poland, officially considered to be a developed country, an increasing consumption level is observed and the demographic situation is described as difficult. Among the most important forecasting trends the following can be mentioned: 1) population aging, 2) a change in the number and size of households (e.g. a decreasing population number, an increase in one- and two-person households, a decrease in the average number of children per household and a departure from the model of a multi-generational family). Food markets are an important topic from both cognitive and scientific perspectives; consumption of food is common in its nature and a real increase in consumption spending has more than doubled since 2000.

It can be inferred from the report: Implementation of sustainable development goals in Poland [Rada Ministrów 2018], target no. 12, i.e. To provide sustainable consumption and production standards that it is necessary to take action aimed at implementing changes in the consumption structure, so as to promote products and services provided in harmony with nature, while respecting environmental issues and, at the same time, satisfying the needs of society. The aim of this article is to identify behavior perceived as disadvantageous for achieving sustainable food consumption.

RESEARCH MATERIAL AND METHODS

In order to achieve the aim of this study, personal results were used, as well as research of other authors. This research was completed with personal knowledge and experience, all gathered using the desk research method. The source material of the study comes from the a personal interview survey carried out in 2017 on 433 residents, aged 18+, of the Greater Poland Voivodship. Research was performed in one region because of differences in the socio-economic development of different Polish voivodships, as well as life quality of the people living there. The Greater Poland Voivodship is one of the best developed voivodships in Poland (when it comes to GDP, economic growth, number of foreign capital investment, unemployment rate, income level, education and human potential). The Greater Poland Voivodship is located in Central-West Poland and consists of 6 cities with over 50,000 inhabitants: 5 of them with 50,000-100,000 inhabitants and one city over 100,000 inhabitants; as well as Poznań – the capital of the region and one of the biggest...
Polish cities inhabited by approximately 540,000 people. Respondents were selected by the quota and purposive sampling method. The group was chosen in an non-arbitrary, quota manner. A research sample was determined on the basis of the general population structure, to make them as similar as possible. Using the data from the GUS Statistical Yearbook (Central Statistical Office), the research sample structure was created adhering to the structure of Greater Poland Voivodship residents in terms of age and sex. The procedure of determining the research sample number according to the method described by Stanisław Kaczmarczyk was used [2011]. This research is one of many prepared during efforts to identify and describe issues of sustainable food consumption [vide Goryńska-Goldmann 2019, Gazdecki, Goryńska-Goldmann 2018, Goryńska-Goldmann, Poloreczki 2018, Goryńska-Goldmann et al. 2016, Goryńska-Goldmann, Gazdecki 2018].

In the article, the results of research into sustainable food consumption and connected issues from a consumer perspective were discussed. The people who took part in the survey marked some objective statements concerning the above mentioned conception. A subjective approach to research allows for such assessment due to the fact that a personal satisfaction level of meeting needs is included, according to the idea of sustainable food consumption. Due to certain obstacles and a lack of measurements, it is more difficult to assume the objective approach which allows to make the assessment of sustainable food consumption on the basis of certain quantitative and valuable standards.

To identify disadvantageous behavior for the development of the sustainable food consumption idea from a consumer perspective, a list of different behavior, underlining that in each case there are potential advantages and disadvantages for a consumer, was made. The respondent’s task was to consider every behavior and decide, whether or not it has an advantageous or disadvantageous effect on him or her. Thanks to such an approach, it was possible to determine what aspects (practices) are unfavorable for achieving sustainable food consumption from a consumer perspective. The participants could rate the level of disadvantages on a scale from 1 to 5, where 1 stands for the smallest disadvantage, and 5 for the biggest disadvantage (respectively: 1 – very low disadvantage, 2 – low disadvantage, 3 – average disadvantage, 4 – high disadvantage, 5 – very high disadvantage). On the basis of responses, the arithmetic average was calculated (Table 1). The results were further analyzed and the different values given to behavior connected with sustainable food consumption in terms of their economic, social and ecological aspects were verified.

A PROFILE OF RESPONDENTS

Among the participants (all aged 18+) 54% were women, and 46% were men. The survey is representative because it encompasses a similar number of respondents from both sex groups in comparison with the current demographic data of the Central Statistical Office, which show that the number of women in the Greater Poland Voivodship is bigger than men (currently slightly above 51%). The biggest group were respondents aged 35-44 (over 19%), 52% of them were women, and 48% were men. Next, there were three age groups: 18-24 years old, 25-44 years old and 55-64 years old; each of these groups consisted of about 16.4% of the whole research group. A slightly smaller group was aged 65 and more (15.9%). The first age group (18-24 years old) included the biggest
relation of women (59%) to men (41%). These differences did not negatively influence the results of the research; they also do not differ from other, widely available research. Both for men and women, the average age was about 44 (with some small differences). Research was carried out in 74 localities; the biggest group consisted of people living in the city of Poznań (43%). The majority had a higher education (33%). Respondents said, that the quality of their life (in terms of income) is average – they have funds to satisfy their everyday needs but have to save money for some more expensive purchases, 36% of the people defined their quality of life as good – they can buy most things without the need to save extra money, and 14% of people defined quality of life as poor – they have to spend money carefully.

RESULTS

The average level of disadvantages pointed out by the research group (for all statements) was 2.25. The result means that consumers perceive given behavior as behavior of a relatively low level of disadvantages for achieving sustainable food consumption. It may mean that the respondents focused on the most important issues from their point of view. The summary of analyzed behavior and its assessment from a consumer perspective is presented in Table 1.

Within the statements connected with the social aspect and showing behavior regarded as disadvantageous from the perspective of the research group in relation to achieving sustainable food consumption, it was observed that the lowest level of disadvantages, indicated by a 1/4 of the whole research group, was matched with the statement: “Avoiding disadvantageous overconsumption demands self-control and self-discipline”. It was a smaller disadvantage for women than for men, characterized by an average income level and representing smaller households. The consumer tries to achieve important goals (leading to full satisfaction) as a result of taking psychological and physical action connected with buying, sourcing, using and consuming goods, as well as his/her own production within a household. Achieving the modern consumption model demands self-control and self-discipline (among others in the way of managing the home budget, organizing time, making purchases based on a list of products, choosing goods from sustainable production, controlling bigger amounts of food used and the way of food disposal). Women were characterized by a higher level of self-control and self-discipline.

From a social point of view, high consumption and a consumer lifestyle, which may have some negative effects on health, is the biggest disadvantage of achieving the idea of sustainable consumption (this issue was pointed out by 2/3 of the population). It was found that the older a person is the more he or she is likely to perceive the consumer lifestyle as a threat for achieving the sustainable food consumption model; there was a positive correlation between age and level of disadvantages. Another correlation was linked to income level; income growth is accompanied by a growth in the disadvantages level stemming from overconsumption (for example: health problems, harmful effects on the environment, being overweight and obesity). In the face of high level pollution, resulting in more and more diseases (including mortal diseases), consumers are motivated to change their consumption style, satisfying their own needs while at the same time taking
Table 1. The answers in relation to the behavior and level of disadvantages for achieving food consumption sustainability according to respondents

<table>
<thead>
<tr>
<th>Forms of behavior in relation to sustainable food consumption</th>
<th>Assessment</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Social area [%]</td>
<td>average</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoiding disadvantageous overconsumption demands self-control and self-discipline (N = 109)</td>
<td>54.13</td>
<td>20.18</td>
<td>22.02</td>
<td>2.75</td>
<td>0.92</td>
<td>1.78</td>
<td></td>
</tr>
<tr>
<td>Being a sustainable consumer demands engaging in the life of the local society (N = 177)</td>
<td>44.63</td>
<td>27.68</td>
<td>22.60</td>
<td>3.95</td>
<td>0.56</td>
<td>1.88</td>
<td></td>
</tr>
<tr>
<td>Exchange, borrowing/lending or other forms of maintaining social relations demand a lot of time and engagement (N = 186)</td>
<td>39.25</td>
<td>29.03</td>
<td>20.97</td>
<td>9.68</td>
<td>0.54</td>
<td>2.03</td>
<td></td>
</tr>
<tr>
<td>I improve the quality of the food consumed but at the same time I decrease its quantity (N = 92)</td>
<td>47.85</td>
<td>15.22</td>
<td>21.74</td>
<td>10.87</td>
<td>4.35</td>
<td>2.09</td>
<td></td>
</tr>
<tr>
<td>High consumption (consumer lifestyle) is nice, but may lead to some negative health effects (N = 298)</td>
<td>23.15</td>
<td>22.48</td>
<td>29.19</td>
<td>17.11</td>
<td>8.05</td>
<td>2.64</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Economic area [%]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I buy local products but I spend more time on shopping (N = 175)</td>
<td>41.14</td>
<td>28.00</td>
<td>20.00</td>
<td>9.14</td>
<td>1.71</td>
<td>2.02</td>
<td></td>
</tr>
<tr>
<td>Meals prepared at home allow to save money but demand more time to prepare (N = 67)</td>
<td>31.34</td>
<td>32.84</td>
<td>25.37</td>
<td>8.96</td>
<td>1.49</td>
<td>2.16</td>
<td></td>
</tr>
<tr>
<td>Buying new goods and services demands time and efforts to gather information (N = 187)</td>
<td>30.48</td>
<td>30.48</td>
<td>24.60</td>
<td>13.37</td>
<td>1.07</td>
<td>2.24</td>
<td></td>
</tr>
<tr>
<td>Responsible shopping demands more engagement and time spent on preparing a shopping list (N=153)</td>
<td>37.91</td>
<td>24.18</td>
<td>17.65</td>
<td>16.34</td>
<td>3.92</td>
<td>2.24</td>
<td></td>
</tr>
<tr>
<td>I am ready to pay more for higher quality products (N = 124)</td>
<td>27.42</td>
<td>31.45</td>
<td>26.61</td>
<td>11.29</td>
<td>3.23</td>
<td>2.31</td>
<td></td>
</tr>
<tr>
<td>Resigning from buying goods „in advance” makes me lose the possibility of gaining an advantage from promotional prices for some food products (N=318)</td>
<td>20.75</td>
<td>23.58</td>
<td>33.33</td>
<td>17.61</td>
<td>4.72</td>
<td>2.62</td>
<td></td>
</tr>
<tr>
<td>Buying food in advance may lead to its waste (N = 317)</td>
<td>23.03</td>
<td>28.08</td>
<td>22.40</td>
<td>15.46</td>
<td>11.04</td>
<td>2.63</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ecological area [%]</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Consuming local products makes me strengthen the local economy but at the same time I have to spend more money on them (N = 129)</td>
<td>27.91</td>
<td>31.01</td>
<td>30.23</td>
<td>7.75</td>
<td>3.10</td>
<td>2.27</td>
<td></td>
</tr>
<tr>
<td>By buying smaller food portions I use more packaging (N = 218)</td>
<td>22.94</td>
<td>26.61</td>
<td>31.19</td>
<td>15.14</td>
<td>4.13</td>
<td>2.51</td>
<td></td>
</tr>
</tbody>
</table>

1 – very low disadvantage, 5 – very high disadvantage
Source: own study based on the survey
care of personal health and family health [Neale 2015, Goryńska-Goldmann, Gazdecki 2016]. The increasing wealth of society and lifestyle changes are an obstacle in achieving sustainable consumption and its right planning. Consumers buy more than they really need.

In the next analyzed area of achieving consumption sustainability, the economic area, some negative behavior from a consumer point of view may be observed. The lowest level of disadvantages came from the statement: “I buy local products but I spend more time on shopping”. Consumers perceive spending more time on buying products from local producers less burdensome in terms of achieving consumption sustainability than for example resigning from buying products in advance (the statement: “Buying food in advance may lead to its waste” and “Resigning from buying goods in advance makes me lose the possibility of gaining an advantage from promotional prices for some food products”). Consumers who want to achieve sustainable food consumption engage their free time in searching for local products and gaining knowledge about its source and availability. Consumer engagement in this model is also linked to searching and purchasing higher quality products (inter alia products which are safer and meet environmental and ethical standards, as well as which come from sustainable production). Such behavior generates higher consumption costs. From a consumer perspective, the price of a product is a determinant of its value, because it is linked to the advantages forming the purchased product’s attributes in relation to its usefulness in the buyers’ opinion [Waniowski 2003]. A sustainable product must bring higher value compared to its traditional equivalents. The ability to bear higher costs coming from such consumption depends on the source and level of financing. Income is the most important economic factor influencing consumption in its quantitative and qualitative approach. The surveyed people stated that more burdensome are higher costs of achieving the sustainable consumption model coming from inter alia buying higher quality products or buying consumer goods in order to limit the amount of purchased food and its wastage, and the loss of profits stemming from losing the possibility of buying cheaper products, than the cost of time spent.

The statements “By buying smaller food portions I use more packages” and “Consuming local products makes me strengthen the local economy but, at the same time, I have to spend more money on them” received a relatively high number of points compared to all other behavior. They showed a connection to environmental protection issues and strengthening the local economy (buying local products, attention to amount of used packaging). According to the Environment Agency [EEC 2014], the influence of food consumption is connected with commuting to shopping centers, using energy while cooking and the storage of food while at the same time providing the right cooling, managing organic waste and packaging. According to the people surveyed, using more packaging as a result of buying smaller food portions is one of the biggest disadvantages of sustainable consumption.

As negative behavior in achieving sustainable consumption, consumers perceive knowingly (the statement says “while agreeing to”), bearing higher costs of purchase and consumption of products from local producers. Respondents stated that bearing higher costs stemming from the consumption of food from local producers is slightly less burdensome than buying smaller portions of food to make consumption more environmentally friendly (decreasing packaging). Nevertheless, it may be assumed that the higher the value of local products is, the bigger the consumer’s willingness to pay a specific price
for such products [De Medeiros et al. 2016]. What is significant is the role of a consumer in creating local economy advantage on the basis of local products. Local products are produced in a non-industrial way and they do not have a mass character. They are based on local production methods and resources [Rogala 2015]. Moreover, they are characterized by higher quality, they are fresh and relatively cheaper because of the lower cost of transport [BDP 2018] (the sale of such products takes place close to the customer’s place of residence in order to shorten the supply chain). Many farmers, entrepreneurs working in the agricultural area, as well as representatives of the agri-food processing sector see the potential to produce such kinds of products. In the context of achieving consumption sustainability, an interesting way of research is the identification of the demand for local products and the factors that shape it.

Behavior with a very low level of disadvantages for the sustainable development of food consumption (from a consumers’ perspective) is connected to a need of self-control and self-discipline, engagement in the life of local society, engagement of customer time in the planning of shopping as well as showing a readiness to share goods with others and build a community. On the other hand, behavior with a low level of disadvantages for sustainable food consumption development is connected with a need to resign from a convenient, consumer lifestyle, as well as higher prices, a need for bigger shopping and food wastage, an awareness of losing advantages from smaller shopping despite promotional prices and less packaging used.

It is worth highlighting that such behavior can significantly influence the participants of food markets (from producing resources, through the processing and production of final products, to trade). A change in consumer behavior (to more sustainable when it comes to the consumption of food) is one of the drivers helping to balance the whole food chain.

**SUMMARY**

Sustainable consumption is inseparably connected with the effectiveness of the food supply chain, still not well identified and difficult to verify. It demands further research from a scientific and technological point of view, in terms of ability to achieve sustainable food consumption.

On the basis of research, it may be stated that consumers perceive the existence of disadvantageous behavior for achieving sustainable food consumption (economic, social and ecological aspect) in their surroundings. Consumers mostly saw behavior with a relatively low level of disadvantages in achieving sustainable food consumption, including those stemming from the cost of moving from a previous model to a sustainable model, which demands spending more time on planning and shopping and also creates the need to control personal behavior in terms of shopping logistics, i.e. planning, organizing, storing, buying and consuming products, as well as waste disposal.

As a very low level disadvantage or inconvenience stemming from achieving sustainable food consumption from a consumer perspective may be behavior demanding self-control and self-discipline (e.g. avoiding excessive, disadvantageous consumption), engagement in the life of the local community and spending more time on looking for local products and exchanging, borrowing, sharing and fostering the community).
Existing results of the national research show that not much identified behavior belongs to the sustainable food consumption idea, which is the effect of a consumers' low willingness to implement it. To identify this idea, it is important to include different issues in research, i.e. connected to disadvantages (inconveniences) for consumers resulting from taking action that helps to achieve sustainable food consumption. It is important to learn consumer opinions; because assessing a given behavior as disadvantageous does not mean that a respondent will refrain from it. It should be pointed out that information about disadvantageous behavior, from a consumer perspective, can be used for planning and implementing new activities aimed at spreading the sustainable food consumption idea. We may shape awareness but behavior is less prone to changes. Providing information about disadvantageous behavior may lead to increasing consumer awareness about sustainable consumption, as well as its positive and negative aspects stemming from that consumption model. As opposed to disadvantageous behavior, there is some advantageous behavior, just as threats are always accompanied by chances, and that is why good practices need to be implemented and further research into the area conducted.

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**ZACHOWANIA NIEKORZYSTNE DLA RÓWNOWAŻENIA KONSUMPCJI ŻYWNOŚCI W OPINIACH KONSUMENTÓW**

Słowa kluczowe: równoważenie konsumpcji, konsumenci, zachowania, rynek żywności

**ABSTRAKT**

Celem artykułu jest określenie zachowań, które są postrzegane jako niekorzystne dla równoważenia konsumpcji żywności przez konsumentów. Zrównoważona konsumpcja, w ekonomii najczęściej wyprowadzana z teorii użyteczności konsumenta, z jednej strony, jest zjawiskiem nierozłącznym z ekonomicznych efektów łańcucha dostaw żywności, a z drugiej – zjawiskiem znacznie mniej rozpoznawanym i trudnym do weryfikacji. W badaniach wykorzystano materiał faktograficzny uzyskany w drodze badania ankietowanego wykonanego techniką bezpośrednich wywiadów osobistych na terenie Wielkopolski. Respondentów dobrano w sposób kwotowo-celowy. Stwierdzono, że konsumenci w swoim otoczeniu dostrzegają występowanie zachowań niekorzystnych dla równoważenia konsumpcji żywności. Uzyskany średni stopień niekorzyści (2,25) wskazuje, że konsumenci oceniali podane zachowania jako te o stosunkowo niskim stopniu niekorzyści dla równoważenia konsumpcji żywności (w aspekcie ekonomicznym, ekologicznym i społecznym). Konsumenci dostrzegali niską niekorzyść dla równoważenia konsumpcji żywności w obrębie zachowań wynikających m.in. z kosztów przejścia z wcześniejszego modelu do zrównoważonego, poświęcania większej ilości czasu planowaniu oraz realizacji zakupów, konieczności kontrolowania własnych zachowań w zakresie logistyki zakupowej, tj. planowania, organizowania, przechowywania, nabywania, spożycia oraz pozbywania się odpadów. Bardzo niską niekorzyść (niedogodność) z tytułu równoważenia konsumpcji żywności, konsumenci wiązaли z zachowaniami wymagającymi samokontroli i samodyscypliny (np. unikając nadmiernej niekorzystnej konsumpcji), zaangażowania w życie lokalnej społeczności, poświęcania większej ilości czasu (m.in. na poszukiwanie lokalnych produktów, aby móc dokonywać wymiany, pożyczać, współdzielić się i podtrzymywać wspólnotowości). Informacja o zachowaniach uznanymi za niekorzystne dla równoważenia konsumpcji żywności może być wykorzystana do planowania jak i wdrażania działań zmierzających do upowszechniania idei i podnoszenia świadomości konsumentów.

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