

AWARENESS OF SUSTAINABLE CONSUMPTION AMONG POLISH CONSUMERS OF GENERATION Z – A CASE STUDY

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Purpose: Progressive climate change requires the implementation of this idea not only in companies or manufacturing plants, but also in households. Therefore, this study attempts to: identify the awareness and type of attitudes of Generation Z consumers toward sustainable consumption, and assess the relationship between attitudes about sustainable consumption issues among Generation Z consumers and their behavior and stated intentions to behave toward sustainable consumption.

Design/methodology/approach: The survey was conducted among young consumers of Generation Z (n = 380). A non-probabilistic sampling technique known as convenience sampling was used to select respondents for the research sample. The research was carried out by indirect online survey measurement method (CAWI), using a survey questionnaire hosted on Google Form.

Findings: Issues of sustainable consumption are familiar to a group of Generation Z consumers. they are aware that excessive consumption and irrational use of resources can adversely affect the environment and climate change. However, the most important criterion in choosing products is price. A favorable aspect is that more and more young consumers are purchasing used products, which may be associated with their lower cost. However, they are more likely to purchase them through online services, which is more convenient. Despite awareness of the benefits of adhering to the principles of sustainable consumption, those surveyed are quite skeptical about supporting nonprofit organizations or participating in social campaigns.

Research limitations/implications: The research was carried out narrowly in terms of subjects, so it cannot be generalized to the entire segment of Generation Z consumers. The scope of the presented research is also limited. The results of the research should be considered as a pilot study.

Practical implications: Findings are relevant to actors along the entire chain of production and distribution of consumer goods, allowing the identification of consumer needs and behavior. State institutions and European Union bodies should continue their efforts leading to the development of the necessary legal and financial instruments that will encourage citizens to take socially and environmentally responsible actions.

Originality/value: This research underscores that sustainable consumption is increasingly important to young consumers and requires an interdisciplinary approach to pro-environmental research on their behavior.

Keywords: sustainable consumption, Generation Z, consumer awareness, pro-environmental attitudes.

Category of the paper: marketing research.

1. Introduction

The idea and practice of sustainable consumption is an important issue these days, as evidenced by its active promotion and support by various institutions, including the United Nations (UN), scientific research centers and non-governmental organizations around the world. International organizations such as the United Nations Environment Program (UNEP) and the Food and Agriculture Organization (FAO) are engaged in educational activities, public campaigns and the development of standards for sustainable consumption (Mammadli, 2023; Ribeiro et al., 2023; Halicka et al., 2019). Sustainable consumption is a complex and ambivalent concept consisting of two opposing terms - consumption and sustainability. However, existing definitions show that the main goal of sustainable consumption is to achieve harmony between meeting consumer needs and protecting the environment. It is a search for a balance between freedom of consumer choice and responsibility for others and the planet (Fanxi, 2022; Pilgrimienė et al., 2020). Nowadays, a significant part of society purchases products and consumes goods in excess of their actual needs. This phenomenon is due to various factors, and one of the main ones is the promotion of the ideology of consumerism, which promotes consumption as a means of experiencing positive emotions (Falke et al., 2022). Modern culture leads people to think that more material goods translate into greater satisfaction and fulfillment. Consumerism is often not only a lifestyle, but also a source of identity and social acceptance. However, more and more people are beginning to realize that unreflective accumulation and use of material goods does not bring long-term happiness. In addition, people, especially young people, are becoming increasingly aware of the negative impact of mass production and overconsumption on the environment, leading them to make more sustainable choices (Seyfi et al., 2023a; Seyfi et al., 2023b; Tarapata 2020).

An alternative to consumerism is the concept of sustainable consumption, which is well known in the field of economics. The concept of sustainable consumption is a key component of consumer utility theory. Due to the progressive growth of the global population and dwindling resources, the problem of long-term sustainability of consumption arises. It then becomes an important issue to maintain a balance between the current level of consumption and the needs of future generations, which is related to the limited amount of goods used in consumption processes. This is why sustainable consumption occupies such an important place in the circle of interest of economists these days (Confetto et al., 2023; Jasrotia et al., 2023).

The core of the definition of sustainability is sustainable consumption in the context of political economy, which implies maintaining the quality of life at the level available in the current civilization framework (Kramer, 2011). Sustainable consumption, ensuring a clean and healthy environment and improving the quality of life for current and future generations are integral parts of a sustainable development strategy, which is understood as a compromise between society's environmental, social and economic goals (Čapienė et al., 2021).

Improving living standards are resulting in increasingly rapid consumption of resources in industry, households and areas of personal consumption. Nowadays, the negative effects that unsustainable consumption patterns have on the environment are becoming increasingly vocal. For a long time, sustainability issues were mainly seen as the responsibility of producers, thus leaving consumers on the sidelines. However, this is not entirely true, as individual consumption behavior is a key factor currently driving unsustainable development and consumption (Pilgrimienė et al., 2020; Chatterjee et al., 2021; Casalegno et al., 2022).

Sustainable consumption harmonizes economic development, social equality and environmental protection. It is worth noting that currently one of the key challenges on a global scale is the problem of environmental pollution (Gavryshkiv, 2019). Pro-environmental and pro-social consumer involvement in sustainable consumption can lead to behavioral change, thus contributing to solving current global challenges (Čapienė et al., 2021). Developed public awareness is extremely important in shaping sustainable consumption (Niewielska, 2021). Sustainable consumption can be described as thoughtful, purposeful and conscious behavior resulting from deep reflection and related to the reevaluation of the human value system. The approach emphasizes moderation in consumption, aiming to rationalize it (Tarapata, 2020).

According to the Wuppertal Institute for Climate, Environment and Energy, pursuing the concept of sustainable consumption, consumers should minimize the amount of waste generated, avoid the use of goods that require high energy consumption during transportation, or purchase second-hand items, which contributes to reducing the production of new goods (Gavryshkiv, 2019).

In both the literature and the media, young people are referred to as Generation Z. Although this name has no formal justification, it is nevertheless widely used in research, scientific studies and in the media. Other terms are also used, such as Digital Natives, Selfie Generation, iGeneration, and Screeners. These terms indicate this generation's strong connection to new technologies. The timeframe of Generation Z has not been formally established. Precisely defining these boundaries is extremely difficult, especially due to the intermingling of generations. The scientific literature points to generations Y and Z as two distinct groups of young people. One of the most significant reasons for the separation of Generation Z in society is considered to be the advanced technological leap covering the years 1990-2000. This dynamic development included the expansion of the Internet and mobile telephony (Gabriellova, Buchko, 2021; Paczka, 2020). The younger generation of consumers is more likely to respond to new trends compared to older ones, resulting in faster adaptation to changing consumer behavior patterns (Kaminska, Krakowiak-Drzewiecka, 2023). Technological advances have a significant impact on the way young people function. They carry out the vast majority of their activities in a virtual environment. Actively using modern technologies, they are gaining more and more knowledge and developing awareness of the impact their choices can have on products, services, as well as the reputation of companies and brands. At some point in the development of this awareness, they acquire a willingness to take action

to promote sustainable consumption in their daily lives. Some of them begin to engage publicly, promoting posture in line with the idea of sustainable consumption. The resulting changes in habits and lifestyles are being implemented by a growing group of people (Faller, Gogek, 2019; Cochoy et al., 2020).

Determinants influencing the choice of sustainable consumption by Generation Z include concern for the environment. Awareness of the impact of human activities on the environment, resulting in pollution, loss of biodiversity or even climate change, among other things, motivates young people to take action to reduce negative impacts by choosing sustainable consumption. In order to improve the natural environment for future generations, it is necessary to reduce the amount of goods consumed. Another important factor is the values that guide young generations. People, guided by ethical values, can pursue sustainable consumption by supporting socially and environmentally responsible companies. At the same time, they try to avoid supporting companies that violate workers' rights or engage in unethical business practices (Wang et al., 2021; Wang, Rhemtulla, 2021). An important aspect that also drives the youngest generation of consumers toward sustainable consumption is concern for health. The concept of sustainable consumption in the context of health and food envisions an increased role for plant-based products, seasonal and local products, and products labeled with quality certificates and the fair-trade symbol in the daily diet. The drive to save money also encourages young people to make more conscious and thoughtful choices. Saving is becoming an integral part of lifestyles, which has an impact on consumer preferences and purchasing decisions. The introduction of sustainable consumption can lead to savings that become apparent in the long term. By reducing water and energy consumption and using items more efficiently, it is possible to generate savings that become noticeable over time (Ulla et al., 2021; Kiet et al., 2023).

Among the sustainable activities often undertaken by most people in their daily lives are first and foremost water and electricity efficiency. Segregating waste and reducing the quantity of products purchased and consumed in favor of quality are equally common practices. On a global scale, there is also growing consumer interest in organic food. The organic food market is currently the fastest growing area of food production. Demand for food products from "organic" crops has been steadily increasing for many years. Consumers are increasingly turning to foods described as "eco" because such products are produced without the use of genetically modified organisms (GMOs), artificial fertilizers and pesticides. In addition, in most cases they are free of additives such as preservatives, colors or sweeteners (Khanh et al., 2023; Kumar et al., 2023). Young people have a positive attitude toward acquiring used items, and by buying them they give them a second life. Particularly popular among young people have become online services or second-hand clothing stores, where it is possible to purchase so-called second-hand items or sell goods that will no longer be used. By buying used products, consumers contribute to reducing waste and consumption of natural resources, which supports the idea of recycling and reuse. In addition, this practice helps minimize the carbon emissions

associated with the production of new items, which is an important aspect of the fight against climate change (Huo et al., 2023; Shahjalal et al., 2023).

Putting sustainable consumption into practice requires specific transformations in both the demand and supply spheres. In the case of the former, it is a matter of changing consumption patterns, which are mainly based on the choice of ecologically sound products

and services, aiming to minimize negative environmental impacts at every stage of their life cycle. In the context of the supply side, modifications in production processes are important, aiming to reduce the consumption of natural resources by improving the ecological efficiency of the production of goods and services (Acampora et al., 2023).

There is a public perception that young people are often unaware of how advertising and brands influence their purchasing decisions and consumption patterns. The media use various strategies, both overt and covert, to manipulate young consumers. Particularly during adolescence, when there is an identity crisis, young people become an attractive group for advertising creators. The implications of this phenomenon for sustainable consumption can be negative, as it leads to increased consumption, which in turn harms the environment and society. Focusing on materialistic values can overshadow more important aspects of life, such as interpersonal relationships and personal development. Consequently, this attitude can contribute to social and environmental imbalances, as the pressure to consume, not always in line with the needs of the individual or society as a whole, increases. To promote sustainable consumption among young people, it is important to educate them about the mechanisms of advertising and encourage them to make informed and thoughtful purchasing decisions (Barwicka, 2018; Huo et al., 2023).

Nevertheless, interest in the idea of sustainable consumption among young people is growing, and their consumer behavior is conducive to promoting environmental and social actions. This trend could have a significant impact on the future of the world, as the young generation, being strong driving forces in society, can contribute to changing consumption standards to more sustainable ones. By preferring environmentally and community-friendly products and services, young consumers can influence the development of a more responsible consumption model, which can contribute to environmental protection and improved living conditions for local communities in the future (Tarapata, 2020).

In the context of the issues presented, this paper attempts to:

- identify the awareness and type of attitudes of Generation Z consumers toward sustainable consumption,
- to assess the relationship between attitudes on issues related to the phenomenon of sustainable consumption among Generation Z consumers and their behavior and stated intentions to behave towards sustainable consumption.

The article contributes the author's original research on sustainable consumption among Polish Generation Z consumers.

2. Subject and research methodology

The survey was conducted among young consumers of Generation Z ($n = 380$). A non-probabilistic sampling technique known as convenience sampling was used to select respondents for the research sample. The research was carried out by indirect online survey measurement method (CAWI), using a survey questionnaire hosted on Google Form. The questionnaire consisted of four thematic blocks. The first part dealt with assessing attitudes toward sustainable consumption issues (15 statements). The second part of the questionnaire consisted of questions to verify behavior towards sustainable consumption (12 statements). In the third part, consumers answered questions about their behavior when using products (11 statements). And the final, fourth part dealt with consumers' declarations of future intentions to support and promote sustainable consumption for the benefit of society (3 assertions). Respondents expressed their level of acceptance, in relation to the statements included in the questionnaire using a 7-point Likert scale, with strong disagreement with a given statement corresponding to a rating of 1 and its strong acceptance to a rating of 7. The collected empirical material obtained during the conducted research was subjected to statistical analysis using Statistica 13.3 software. Basic statistics such as mean values, standard deviations, median, mode, skewness and kurtosis were calculated. R-Pearson correlation analysis was used to determine the strength and significance of the relationships between attitude, behavior and intention.

3. Results and discussion

Table 1 includes statements that relate to attitudes (statements 1.1-1.15), behaviors (statements 2.1-2.12 and 3.1-3.11) and stated intentions regarding sustainable consumption of young consumers (statements 4.1-4.3).

Based on the research conducted and the results obtained, it was found that Generation Z consumers showed positive attitudes regarding the issue of sustainable consumption (Table 1). Respondents are more aware of the negative impact of production on the environment (mean score of 5.55, $M = 6$) than of excessive consumption (mean score of 4.95, $M = 5$). Nevertheless, they are aware of the adverse impact of over-consumption on climate change (mean score 5.25, $M = 6$). They also expressed concern about natural resources diminishing too quickly (mean score 5.56, $M = 6$). Surveyed consumers also felt that both businesses (mean score of 5.55, $M = 6$) and all citizens (mean score of 5.47, $M = 6$) should be more involved in activities to promote the idea and awareness of sustainable consumption among the public. Those who took part in the survey also expressed their concern about the presence in products available on the

market of too many ingredients that can negatively affect both the environment (mean score of 5.55, M = 6) and the human body (mean score of 5.93, M = 6). Considering purchasing behavior, the most important criterion turned out to be price (mean score of 6.15, M = 6) and information on the composition of products (mean score of 5.55, M = 6). Consumers also declared that they purchase second-hand products such as clothing, toys and durable goods, but they are much more likely to purchase them using online services (average score of 5.56, M = 6) than stationary stores (average score of 4.14, M = 4). It is definitely a favorable phenomenon among respondents that they do not purchase excessive amounts of food products (mean score 5.45, M = 6), but despite this and positive attitudes towards sustainable consumption, respondents do not pay much attention to the expiration date when making more food purchases (mean score 3.85, M = 4). When it comes to sustainable consumption usage behavior, using public transportation to reduce carbon emissions proved to be the most important factor (mean score of 6.11, M = 6), as well as taking care of one's own health by limiting consumption of highly processed products and those with a lot of additives (mean score of 5.87, M = 6), and regularly separating waste generated in the household (mean score of 5.61, M = 6). Although the majority of respondents do not buy groceries to "stock up", this phenomenon is quite common and ranks far lower in the hierarchy of factors. This may be due to the fact that points for free exchange of food between users are not always available. It is also a favorable phenomenon that respondents do not throw away durable, still usable products such as clothing or small household appliances, but resell such products on online services, less often giving them to people in need. This may be related to a desire to recoup some of the money invested in such products. Less important among respondents is reducing household electricity or water consumption. In the case of the results regarding intentions to behave towards sustainable consumption, it was shown that respondents have a neutral attitude regarding supporting nonprofit organizations or participating in campaigns for the benefit of society, as well as purchasing products whose part of the proceeds goes towards environmental protection.

Table 1.

Attitudes and behaviors of Generation Z consumers regarding sustainable consumption

Variables	X	SD	M	Mo	S	K
Consumer attitudes towards sustainable consumption						
1.1. I am aware of the negative impact of excessive consumption on the environment	4,95	1,50	5	6	-0,69	-0,16
1.2. I am aware of the negative impact of excessive production on the environment	5,55	1,53	6	5	-0,34	-0,55
1.3. I recognize the deepening problems concerning ecology and society	5,44	1,39	6	6	-1,01	0,91
1.4. I believe that waste is increasing alarmingly fast	5,43	1,48	6	7	-0,99	0,82
1.5. I am aware of the increasing pollution of the environment	5,55	1,35	6	6	-1,17	1,44
1.6. I am aware of the increasing pollution of water bodies and groundwater	5,45	1,50	6	7	-1,04	0,75
1.7. I believe that the world's sources of natural resources are diminishing too fast	5,56	1,61	6	6	-0,68	-0,24

Cont. table 1.

1.8. I believe that over-consumption is the cause of adverse climate change	5,25	1,47	6	6	-0,96	0,57
1.9. I believe that manufacturing companies should engage in activities to educate about sustainable consumption	5,55	1,26	6	6	-0,69	-0,16
1.10. I believe that every citizen should participate in campaigns and actions for the benefit of society	5,47	1,35	6	5	-0,34	-0,55
1.11. I believe that there are too few social campaigns on reducing consumption by the public	5,10	1,34	5	6	-1,01	0,91
1.12. I am sensitive to environmental issues	5,14	1,65	5	7	-0,99	0,82
1.13. I am convinced that I can improve the environment with my actions	4,93	1,46	5	6	-1,17	1,44
1.14. I believe that there are too many substances in products available on the market that adversely affect the environment	5,55	1,39	6	7	-1,04	0,75
1.15. I believe that there are too many substances in the products available on the market that adversely affect the human body	5,93	1,45	6	6	-0,92	0,62
Shopping behavior						
2.1. I try to choose environmentally friendly brands/products	4,56	1,25	5	5	-0,62	-0,04
2.2. I often make purchases of products packaged in an environmentally friendly way	4,79	1,46	5	6	-0,91	0,66
2.3. When going shopping, I carry a reusable bag with me	5,05	1,89	5	5	-0,68	-0,22
2.4. I don't buy groceries to "stock up"	5,45	1,75	6	5	-0,75	0,13
2.5. When buying more food products, I pay attention to the expiration date	3,85	1,98	4	5	-0,75	0,44
2.6. When buying products, I read their composition and pay attention to whether they contain ingredients that are harmful to the environment	4,95	1,56	5	5	-0,76	0,20
2.7. When buying products, I read their composition and pay attention to whether they contain ingredients unfavorable to health	5,55	1,43	6	4	-0,40	-0,06
2.8. When I have a choice between two products I buy the one that is less harmful to the environment	4,15	1,89	4	5	-0,27	-0,79
2.9. When I have a choice between two products I buy the one that is recycled	4,05	1,65	4	6	-1,09	1,12
2.10. When making a purchase, the most important thing for me is the price	6,15	1,45	6	6	-0,92	0,37
2.11. When making purchases of textile/everyday use products, I choose stores with used products	4,14	1,98	4	5	-0,79	0,01
2.12. When shopping for textile/everyday use products, I use online services that offer used products	5,56	1,75	6	5	-0,44	-0,36
Usage behavior						
3.1. I try to avoid consuming products that contain a lot of unhealthy ingredients and highly processed food	5,87	1,55	6	5	-0,49	-0,14
3.2. I take excess purchased or prepared products to an food sharing point	4,65	1,51	5	5	-0,68	0,40
3.3. I do not throw away food in the household	3,85	2,15	4	5	-0,94	0,53
3.4. I segregate garbage regularly	5,61	1,47	6	5	-0,22	-0,44
3.5. If I no longer use a durable product, but it is still functional/wearable I sell it on online services	5,55	1,25	6	5	-0,30	-0,49
3.6. If I no longer use a durable product but it is still serviceable/wearable I donate it to people in need	4,88	1,89	5	5	-0,89	0,81
3.7. I always turn off lights in rooms that no one is using	4,67	1,72	5	7	-1,82	4,40
3.8. I use energy-saving light sources	4,01	2,56	4	7	-2,59	9,13
3.9. I turn down the radiators during the heating season	4,55	1,98	5	6	-1,36	1,89
3.10. I save water when bathing, washing up	5,09	1,44	5	6	-1,58	2,75
3.11. I choose public transportation to reduce CO ₂ emissions	6,11	1,05	6	5	-0,73	-0,38

Cont. table 1.

Intentions to behave towards sustainable consumption						
4.1. I am willing to pay a higher price for goods whose producers are committed to environmental efforts	4,25	1,43	4	5	-1,45	2,08
4.2. I am ready to take part in a social campaign for sustainable consumption among the public	4,02	1,89	4	5	-1,28	1,84
4.3. I am ready to support charitable organizations that implement environmental activities	4,14	1,43	4	5	-0,85	0,22

X – arithmetic mean, SD – standard deviation, M – median, Mo – mode, S – skewness, K – kurtosis.

Source: own research.

Tables 2a, 2b and 2c present the determinants between Generation Z consumers' attitudes about sustainable consumption and their shopping and product use behavior and declared behavioral intentions. Based on the research conducted and the results obtained, it was shown that the correlations between almost all the analyzed variables were statistically significant ($p < 0.05$). The values of the coefficients ranged from 0.1 to 0.7. Coefficient values below 0.3 indicate low correlation of the analyzed variables, in the range of 0.3-0.5 - medium, while above 0.5 - strong. It was shown that people who perceive the deepening problems of ecology and society very often purchase environmentally friendly products/brands ($r = 0.60$) and packaged in an environmentally friendly way ($r = 0.70$). These people are also more likely to donate products they no longer use to people in need ($r = 0.63$). Although in the surveys conducted, the value of the correlation coefficient between attributes took on average values.

Table 2a.

Relationships between attitudes toward sustainable consumption of Generation Z consumers and behavioral attitudes and intentions

Variables	Variables														
	1.1.	1.2.	1.3.	1.4.	1.5.	1.6.	1.7.	1.8.	1.9.	1.10.	1.11.	1.12.	1.13.	1.14.	1.15.
1.1.	1,00														
1.2.	0,05	1,00													
1.3.	0,37	0,12	1,00												
1.4.	0,44	0,15	0,69	1,00											
1.5.	0,53	0,17	0,61	0,65	1,00										
1.6.	0,47	0,09	0,59	0,71	0,61	1,00									
1.7.	0,54	-0,01	0,46	0,49	0,47	0,45	1,00								
1.8.	0,57	-0,02	0,42	0,38	0,44	0,40	0,53	1,00							
1.9.	0,68	0,05	0,37	0,44	0,53	0,47	0,54	0,57	1,00						
1.10.	0,05	0,69	0,12	0,15	0,17	0,09	-0,01	-0,02	0,05	1,00					
1.11.	0,37	0,12	0,57	0,69	0,61	0,59	0,46	0,42	0,37	0,12	1,00				
1.12.	0,44	0,15	0,59	0,65	0,65	0,51	0,49	0,38	0,44	0,15	0,69	1,00			
1.13.	0,53	0,17	0,61	0,65	0,69	0,51	0,47	0,44	0,53	0,17	0,61	0,65	1,00		
1.14.	0,47	0,09	0,59	0,51	0,61	0,51	0,45	0,40	0,47	0,09	0,59	0,71	0,61	1,00	
1.15.	0,52	0,14	0,58	0,66	0,59	0,67	0,53	0,43	0,52	0,14	0,58	0,66	0,59	0,67	1,00
2.1.	0,40	0,00	0,60	0,55	0,52	0,58	0,50	0,42	0,40	0,00	0,60	0,55	0,52	0,58	0,54
2.2.	0,43	0,07	0,70	0,66	0,60	0,61	0,47	0,41	0,43	0,07	0,70	0,66	0,60	0,61	0,60
2.3.	0,38	0,09	0,54	0,60	0,46	0,50	0,47	0,35	0,38	0,09	0,54	0,60	0,46	0,50	0,49
2.4.	0,38	0,03	0,53	0,57	0,46	0,50	0,44	0,38	0,38	0,03	0,53	0,57	0,46	0,50	0,49
2.5.	0,37	0,08	0,55	0,56	0,51	0,48	0,47	0,31	0,37	0,08	0,55	0,56	0,51	0,48	0,47
2.6.	0,35	0,00	0,50	0,53	0,45	0,54	0,48	0,45	0,35	0,00	0,50	0,53	0,45	0,54	0,48
2.7.	0,35	-0,01	0,47	0,48	0,43	0,47	0,41	0,39	0,35	-0,01	0,47	0,48	0,43	0,47	0,45
2.8.	0,35	-0,02	0,52	0,50	0,47	0,48	0,37	0,36	0,35	-0,02	0,52	0,50	0,47	0,48	0,46

Cont. table 2a.

2.9.	0,54	0,09	0,49	0,53	0,59	0,57	0,56	0,51	0,54	0,09	0,49	0,53	0,59	0,57	0,56
2.10.	0,37	0,07	0,47	0,49	0,46	0,48	0,41	0,34	0,37	0,07	0,47	0,49	0,46	0,48	0,48
2.11.	0,45	0,10	0,57	0,60	0,56	0,51	0,51	0,39	0,45	0,10	0,57	0,60	0,56	0,51	0,52
2.12.	0,37	0,06	0,50	0,57	0,48	0,48	0,47	0,29	0,37	0,06	0,50	0,57	0,48	0,48	0,42
3.1.	0,36	0,09	0,53	0,56	0,57	0,53	0,44	0,36	0,36	0,09	0,53	0,56	0,57	0,53	0,49
3.2.	0,49	0,05	0,59	0,62	0,60	0,62	0,48	0,44	0,49	0,05	0,59	0,62	0,60	0,62	0,55
3.3.	0,35	0,05	0,63	0,62	0,56	0,58	0,45	0,37	0,35	0,05	0,63	0,62	0,56	0,58	0,52
3.4.	0,40	0,03	0,47	0,55	0,45	0,49	0,42	0,34	0,40	0,03	0,47	0,55	0,45	0,49	0,50
3.5.	0,30	0,06	0,52	0,53	0,43	0,43	0,43	0,30	0,30	0,06	0,52	0,53	0,43	0,43	0,46
3.6.	0,45	0,09	0,63	0,67	0,59	0,68	0,45	0,41	0,45	0,09	0,63	0,67	0,59	0,68	0,60
3.7.	0,12	0,18	0,19	0,19	0,20	0,17	0,13	0,08	0,12	0,18	0,19	0,19	0,20	0,17	0,20
3.8.	0,28	0,09	0,30	0,33	0,32	0,25	0,30	0,24	0,28	0,09	0,30	0,33	0,32	0,25	0,31
3.9.	0,11	0,06	0,19	0,16	0,19	0,15	0,15	0,03	0,11	0,06	0,19	0,16	0,19	0,15	0,13
3.10.	0,17	0,11	0,13	0,16	0,21	0,14	0,17	0,08	0,17	0,11	0,13	0,16	0,21	0,14	0,19
3.11.	0,09	-0,10	0,06	0,10	0,09	0,09	0,20	0,10	0,09	-0,10	0,06	0,10	0,09	0,09	0,12
4.1.	0,05	0,09	0,17	0,25	0,19	0,17	0,08	0,05	0,05	0,09	0,17	0,25	0,19	0,17	0,18
4.2.	0,24	0,01	0,42	0,45	0,34	0,37	0,40	0,17	0,24	0,01	0,42	0,45	0,34	0,37	0,35
4.3.	0,23	-0,01	0,35	0,35	0,27	0,35	0,28	0,13	0,23	-0,01	0,35	0,35	0,27	0,35	0,33

Source: own research.

Consumers who perceive the problem of increasing waste are also concerned about the increasing pollution of water bodies ($r = 0.69$), when shopping for products such as clothing they are more likely to choose second-hand stores ($r = 0.60$), do not throw away excess food products at households ($r = 0.62$) and are more likely to refer them to an eatery ($r = 0.62$). In addition, those who believe they can improve the environment with their actions always turn off lights in unused rooms ($r = 0.32$) and say they are willing to participate in a social campaign for sustainable consumption ($r = 0.34$). The study also found that consumers who are aware of the too-fast diminishing natural resources negatively view too many food additives ($r = 0.53$) and are more likely to choose environmentally friendly ones when making purchases ($r = 0.50$). These individuals are also more likely to take advantage of second-hand stores' offerings ($r = 0.51$). It was also found that those shopping for products in non-environmentally hazardous packaging often take their own bag with them ($r = 0.54$), do not waste food products ($r = 0.69$), as well as regularly segregate household trash ($r = 0.51$). These consumers also report participating in social campaigns ($r = 0.44$) and helping nonprofit organizations ($r = 0.44$).

Table 2b.

Relationships between attitudes toward sustainable consumption of Generation Z consumers and behavioral attitudes and intentions

Variables	Variables												
	2.1.	2.2.	2.3.	2.4.	2.5.	2.6.	2.7.	2.8.	2.9.	2.10.	2.11.	2.12.	
2.1.	1,00												
2.2.	0,67	1,00											
2.3.	0,57	0,54	1,00										
2.4.	0,59	0,51	0,64	1,00									
2.5.	0,56	0,56	0,64	0,53	1,00								
2.6.	0,60	0,52	0,54	0,54	0,59	1,00							
2.7.	0,55	0,49	0,48	0,52	0,48	0,58	1,00						
2.8.	0,59	0,55	0,52	0,53	0,51	0,49	0,53	1,00					
2.9.	0,49	0,54	0,46	0,46	0,52	0,46	0,44	0,50	1,00				

Cont. table 2b.

2.10.	0,46	0,45	0,43	0,44	0,54	0,47	0,47	0,42	0,49	1,00		
2.11.	0,60	0,53	0,66	0,61	0,68	0,62	0,60	0,58	0,53	0,53	1,00	
2.12.	0,55	0,49	0,62	0,53	0,65	0,58	0,53	0,53	0,50	0,46	0,70	1,00
3.1.	0,53	0,50	0,49	0,52	0,56	0,51	0,55	0,57	0,56	0,51	0,64	0,60
3.2.	0,66	0,61	0,55	0,60	0,58	0,59	0,56	0,57	0,59	0,52	0,64	0,59
3.3.	0,66	0,63	0,53	0,56	0,60	0,57	0,52	0,51	0,43	0,44	0,59	0,52
3.4.	0,56	0,51	0,51	0,56	0,55	0,52	0,51	0,56	0,47	0,47	0,57	0,54
3.5.	0,60	0,55	0,56	0,53	0,57	0,56	0,54	0,58	0,39	0,43	0,62	0,55
3.6.	0,61	0,66	0,49	0,56	0,53	0,55	0,51	0,49	0,60	0,47	0,53	0,51
3.7.	0,03	0,18	0,08	0,06	0,08	0,08	0,08	-0,02	0,11	0,14	0,08	0,11
3.8.	0,16	0,29	0,23	0,23	0,21	0,21	0,23	0,19	0,30	0,25	0,29	0,22
3.9.	0,18	0,20	0,20	0,15	0,26	0,17	0,20	0,24	0,21	0,16	0,22	0,28
3.10.	0,11	0,22	0,10	0,20	0,12	0,08	0,18	0,11	0,20	0,19	0,10	0,10
3.11.	0,18	0,12	0,24	0,19	0,31	0,15	0,20	0,29	0,19	0,22	0,23	0,26
4.1.	0,06	0,18	0,06	0,13	0,04	0,12	0,12	0,02	0,12	0,18	0,04	0,08
4.2.	0,47	0,47	0,52	0,47	0,55	0,47	0,46	0,44	0,38	0,39	0,57	0,58
4.3.	0,41	0,44	0,34	0,38	0,39	0,39	0,39	0,37	0,26	0,26	0,38	0,44

Source: own research.

Table 2c.

Relationships between attitudes toward sustainable consumption of Generation Z consumers and behavioral attitudes and intentions

Variables	Variables													
	3.1.	3.2.	3.3.	3.4.	3.5.	3.6.	3.7.	3.8.	3.9.	3.10.	3.11.	4.1.	4.2.	4.3.
3.1.	1,00													
3.2.	0,60	1,00												
3.3.	0,51	0,58	1,00											
3.4.	0,60	0,62	0,49	1,00										
3.5.	0,54	0,57	0,59	0,73	1,00									
3.6.	0,61	0,67	0,61	0,53	0,50	1,00								
3.7.	0,05	0,10	0,10	-0,06	-0,05	0,14	1,00							
3.8.	0,22	0,31	0,20	0,16	0,13	0,30	0,47	1,00						
3.9.	0,14	0,25	0,18	0,19	0,19	0,19	0,26	0,28	1,00					
3.10.	0,18	0,18	0,19	0,19	0,10	0,16	0,19	0,36	0,39	1,00				
3.11.	0,23	0,22	0,12	0,25	0,20	0,11	0,09	0,20	0,33	0,30	1,00			
4.1.	0,11	0,15	0,13	0,03	0,03	0,18	0,55	0,34	0,18	0,26	0,16	1,00		
4.2.	0,40	0,48	0,48	0,47	0,49	0,39	0,23	0,38	0,45	0,32	0,47	0,29	1,00	
4.3.	0,37	0,42	0,40	0,42	0,40	0,37	0,18	0,25	0,39	0,36	0,45	0,23	0,70	1,00

Source: own research.

Based on the survey, it can be concluded that issues of sustainable consumption are familiar to a group of Generation Z consumers. They are aware that over-consumption and irrational use of resources can adversely affect the environment and climate change. However, the most important criterion in choosing products is price. A favorable aspect is that more and more young consumers are purchasing used products, which may be associated with their lower cost. However, they are more likely to purchase them through online services, which is undoubtedly more convenient. Despite awareness of the benefits of adhering to the principles of sustainable consumption, those surveyed are quite skeptical about supporting nonprofit organizations or participating in social campaigns.

Tarapata (2020) in his research indicates that a trend of sustainable consumption can be observed among young consumers due to their environmental knowledge. They are individuals, aware of both the increasing environmental problems and the positive effects of their own actions that can affect them (Tarapata, 2020). In a study conducted by Byrd et al., (2023) among young consumers, it was shown that almost 70% (69.1%) expressed concern about wasting natural resources, and 60.3% of respondents revised their shopping habits in relation to environmental protection (Byrd et al., 2023). According to Chen and Mandi (2023), China's Generation Z is showing a growing trend toward consumption that is environmentally friendly. According to the authors, the public's awareness of concern for both their health and the environment increased significantly during the pandemic, which was also significantly influenced by social media (Chen, Mandi, 2023). According to a study by Dragolea et al., (2023) there is a strong correlation between the sustainable consumption of Generation Z consumers and the satisfaction they feel with environmental activities. However, these authors found no correlation between the sustainable behaviors of young consumers and information on sustainable practices of companies, conveyed through marketing tools (Dragolea et al., 2023).

A study conducted by Gomes et al., (2023) among young Portuguese consumers showed that environmental concerns, anticipation of a green future and perceived green quality are the most likely drivers for Generation Z to purchase green products, and they are able to pay a higher amount for such products. According to the authors, the study provides the first evidence of how environmental concerns, future green vision, perceived quality and green benefits by young Portuguese consumers of Generation Z can influence their willingness to pay more for green products (Gomes et al., 2023). According to Wei et al., (2018) Generation Z consumers are increasingly aware of the importance of environmental protection and are willing to contribute to solving environmental problems.

According to a study by Jasek et al., (2022), young consumers pursuing the tenets of sustainable consumption most often indicated segregating waste, saving water, and giving up traveling short distances in vehicles in favor of walking. On the other hand, factors such as buying food products that contain the Fair Trade mark and clothes that are certified organic were rated lowest. According to the authors, these two low-rated factors may be due to the fact that products with such labels are more expensive than their commercial substitutes (Jaska et al., 2023).

As shown in a study by Milfont and Schultz (2016), environmental, social and economic risks are perceived by an increasing number of consumers, and they are therefore ready to take action to reduce this by implementing sustainable consumption principles. Concari et al. (2020) pointed out the need for an interdisciplinary approach to pro-environmental research on consumer behavior and listed such areas as engineering, chemistry, ecology, economics, marketing, law, business management, sociology and psychology. Today's consumer, thanks to easier access to multiple sources of information, has a wider range of knowledge and expects

manufacturers to make products that meet their needs. Oriented toward sustainable consumption, consumers expect production technologies that are environmentally friendly and distribution channels, but also to fit into the new economic model of a circular economy (Concari et al., 2020; Musova et al., 2021).

Conclusions

Surveys conducted have shown that young Generation Z consumers are aware of sustainable consumption. They express concern about the state of the environment or dwindling natural resources. According to the respondents, manufacturing companies and governmental and non-governmental organizations should engage in social campaigns to communicate information on sustainable consumption to the public. Nevertheless, almost half of the total number of consumers said they were reluctant to pay more for purchasing goods that are less harmful to the environment, but they pay more attention to whether these products have a negative impact on their health. It was shown that second-hand products are becoming increasingly popular and are more likely to be purchased from online services than from stationary stores. It has been shown that environmental concerns are less important during household use. It is worrying that more than half of the respondents throw away unused food products, which may be due to the fact that they do not pay attention to the expiration date of such products or do not have the opportunity to donate them to free food exchange points. Unfortunately, consumers also pay little attention to the rational use of energy, water or heating in households. It has also been shown that concern for the environment is less important in the hierarchy of factors than the price of the good being purchased. Consumers are also quite skeptical about participating in public advocacy campaigns aimed at promoting awareness of sustainable consumption. The results obtained are of great importance for actors along the entire chain of production and distribution of consumer goods, making it possible to identify consumer needs and behavior. State institutions and European Union bodies should continue their efforts leading to the development of the necessary legal and financial instruments to encourage citizens to take socially and environmentally responsible actions.

The results obtained cannot be unambiguously applied to the entire segment of Generation Z consumers, as the research was carried out within a limited subject range. The scope of the results presented is also limited. Further research is needed to determine the profile of the consumer who realizes the tenets of sustainable consumption, along with their characteristics based on social structure and individual psychographic conditions.

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