

Sustainable Behaviors of Young Polish Consumers: the Impact on Logistics and Business Strategies

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ABSTRACT:

The main objective of this survey is to analyze the sustainable behavior of young Polish consumers. The specific objectives are to find out the respondents' opinions on the most disturbing environmental phenomena and actions that negatively affect the environment. In addition, an important goal is to learn about their self-assessment of pro-environmental attitudes and to identify pro-environmental actions most often taken by young consumers, as well as to assess sustainable actions taken by companies in the logistics area. The results are based on empirical research concerning sustainable behaviors of young Polish consumers in a research sample of 50 consumers. The research was conducted in April and May 2024 and covered the entire area of Poland. The survey shows that respondents have a good assessment of their environmental attitude. As many as 90% of them perceive growing environmental and social problems. The most worrisome environmental issues in their view are increased garbage and waste, polluted air and water, dangerous chemicals in everyday products, and climate change-the greenhouse effect. Among the activities that have the most detrimental impact on the environment, respondents identified deforestation, improper waste management, consumerism, pollution from pesticides used in agriculture and the burning of fossil fuels. Three-quarters of respondents believe they can contribute to improving the environment with their actions, and nearly two-fifths say they are willing to pay more for environmentally friendly products or products from companies that support social causes. Respondents also take a number of individual pro-environmental measures, and among them they are most likely to turn off lights, use reusable bags, segregate trash, use reusable bottles, conserve water and choose environmentally friendly forms of delivery for purchased goods. However, when making purchases, most of them do not choose products offered by companies that are actively involved in environmental activities. Up-to-date knowledge on the sustainable behavior of young consumers is particularly important for both the business and government communities, as it provides information on tailored strategies and policies that align with evolving values, ensuring competitiveness, and meeting environmental and social goals. Limitations of the study include the small sample size of the empirical study, as well as the limited nature of the survey questionnaire.

Keywords: sustainability, social responsibility, sustainable consumer, young generation consumer

1. Introduction

Sustainable consumer behavior is becoming an increasingly important area of research in the context of today's environmental and social challenges. Research in this area not only provides an understanding of consumer attitudes and actions in the context

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of environmental protection, but also enables the identification of ways in which companies can adjust their marketing strategies and operational activities to contribute to sustainable development.

The literature highlights the importance of research on sustainable consumer behavior in the context of environmental and social challenges (e.g., Jones et al., 2010). In recent years, increasing attention has been paid to analyzing consumer attitudes, preferences and actions in the context of environmental protection (e.g., Khan et al., 2020; Luchs et al., 2010; Musova et al., 2021; Sun & Wang, 2020). There are studies that focus on understanding what factors influence consumer choices related to sustainable products (e.g., Banytè et al., 2010; Lee & Haley, 2022; Wojciechowska-Solis & Barska, 2021), as well as on identifying the most effective marketing activities that promote environmentally friendly products (e.g., Kardos et al., 2019; Milovanov, 2015; Park & Lee, 2014; Shabbir et al., 2020).

Young consumers play a key role in the context of sustainability and environmental protection, as their attitudes and behaviors are formed in early adulthood and can set future consumer trends. Studies show that the younger generations are increasingly aware of environmental and social problems and increasingly willing to take action to solve them (e.g., Morin & Gillespie, 2021; Nocolić et al., 2022; Ziesemer et al., 2021). In addition, young consumers are often open to innovation and new technologies, including sustainable products and services, making them an important market segment for companies seeking to promote green products (Lucian-Florin, 2012; Maciejewski, 2016). Young consumers also have the potential to pressure companies and institutions to take more sustainable actions, by, for example, preferring green products and services and engaging in social and pro-environmental activities (Bray et al., 2019).

Research addressing this topic has been undertaken quite frequently in recent years, however, due to the dynamically changing environment, diverse cultural backgrounds or growing consumer awareness and education, it is worth continuing and refreshing knowledge in this area. Current research on the sustainable behavior of young consumers can provide important insights for companies and institutions on adapting marketing and operational strategies to changing consumer preferences and promoting social and environmental sustainability.

Therefore, the main objective of this paper is to analyze the sustainable behavior of young Polish consumers. The specific objectives are to find out the respondents' opinions on the most disturbing environmental phenomena and actions that negatively affect the environment. In addition, an important goal is to learn about their self-assessment of pro-environmental attitudes and to identify pro-environmental actions most often taken by young consumers, as well as to assess sustainable actions taken by companies in the logistics area.

2. Data and research methodology

The method used in the research process was a diagnostic survey using a survey technique. The survey used CAWI (Computer Assisted Web Interview) with survio.pl. The survey link was distributed via social media and email addresses, using the snowball method of selecting respondents. The questionnaire developed for the study consisted of

a main section containing a brief introduction and instructions for respondents, eight main questions, and a metric to characterize respondents. The survey was conducted among Polish residents aged 12–35, both male and female, from April 1 to May 31, 2024. Fifty correctly completed survey sheets were obtained. Table 1 shows the characteristics of the survey group.

Table 1. Characteristics of the consumers participating in the survey (n=660)

Characteristics of respondents	Responses	
	Number	%
Gender		
Female	38	76%
Male	12	24%
Age		
12–17	4	8%
18–25	29	58%
26–35	17	34%
Education		
Basic	1	2%
Junior high school	2	4%
Professional	2	4%
Average	25	50%
Higher	20	40%
Income situation		
Very bad	1	2%
Bad	4	8%
Average	24	48%
Okay	16	32%
Very good	5	10%
Place of residence		
City	33	66%
Village	17	34%

Source: own elaboration based on primary research results

3. Results and discussion

Research on environmental attitudes shows that most of them have a positive view of their attitude toward the environment. Of the respondents, 56% described their attitude as rather good, 16% as good, and 6% as definitely good. Only 6% of respondents expressed a negative assessment of their attitude, with 4% rating it as rather bad and 2% as bad. Having no opinion on the subject was given by 16% of respondents (Figure 1).

Compared to other countries, these results indicate a similar tendency among young people to have a positive perception of their environmental activities. Surveys conducted in western countries, such as Germany and the United Kingdom, also show a high self-assessment of environmental attitudes among young people (EU Commission, 2020).

In a global context, the trend toward a positive self-assessment of environmental attitudes may be the result of increasing environmental awareness and sustainability education. Young people are more aware of the dangers of climate change and

environmental degradation, prompting them to adopt more environmentally friendly attitudes and actions.

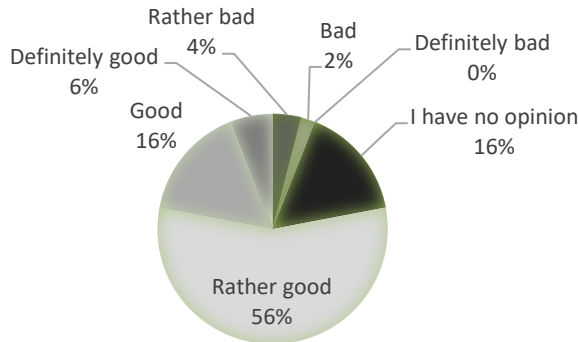


Figure 1. Distribution of responses to the question: "How would you rate your own environmental attitude?"
Source: own study based on secondary sources

The vast majority of respondents (90%) say they perceive growing environmental and social problems. Only 10% of respondents do not notice such problems (Figure 2). These results indicate high public awareness of environmental challenges and social issues.

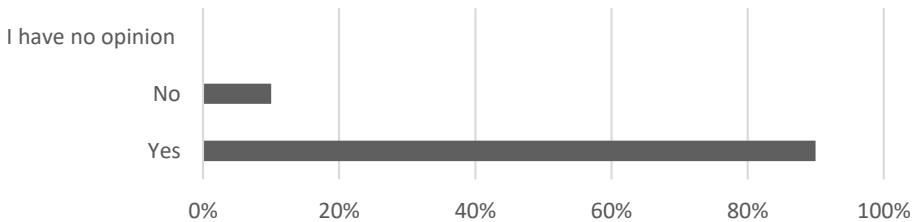


Figure 2. Distribution of responses to the question: "Do you perceive growing environmental and social problems?"
Source: own study based on secondary sources

Respondents identify a number of key environmental issues. Table 2 shows the distribution of responses to the question "Which environmental issues of concern do you see?". As can be seen, the largest percentage of respondents (76%) indicated an increased amount of garbage and waste. Other problems include air and water pollution, which 72% of respondents perceive, and the presence of hazardous chemicals in everyday products, as indicated by 68% of respondents. In addition, 62% of respondents noted climate change and the greenhouse effect. Problems such as natural disasters (32%), depletion of natural resources (54%) and loss of biodiversity (52%) are also noted, although less frequently.

Table 2. Distribution of responses to the question: “Which environmental issues of concern do you perceive?”

Issues	Answers	%
Increased amount of garbage and waste	38	76%
Polluted air and water	36	72%
Climate change – the greenhouse effect	31	62%
Natural disasters	16	32%
Hazardous chemicals contained in everyday products	34	68%
Depletion of the earth’s natural resources	27	54%
Loss of biodiversity – irreversible damage to the environment due to species dying out	26	52%
Other	2	4%

Source: own elaboration based on primary research results

An article published by the European Environment Agency (EEA, 2021) in 2021 under the title “What is destroying Europe's nature?” discusses the main threats to Europe’s environment. The article highlights several key factors contributing to the degradation of nature on the European continent. Some of the main problems are the loss of biodiversity, air pollution, deforestation, climate change, the extraction of natural resources and overuse of natural resources. These factors have negative impacts on human health, ecosystems and the economy, requiring coordinated action at various levels: national, European and global.

Respondents were asked to rate the negative environmental impact of selected activities on a scale of 1 to 5, with 1 having the least impact and 5 having the greatest. The results show the number of marked responses for each activity (Table 3). As can be seen, respondents rated various activities negatively affecting the environment at varying levels. They attributed the greatest impact to logging, with 46 indicating the highest rating (5 and 4). Also of significant concern are improper waste management (42), consumerism (33), the burning of fossil fuels (29), and over-urbanization and non-ecological packaging of purchased goods. In contrast, non-environmental heat sources in buildings, mass tourism, unsustainable private transportation, the non-environmental delivery of purchased goods or unintelligent and non-environmental warehouses are rated more moderately, with the highest number of responses at 3.

Table 3. The degree of negative impact on selected activities on the environment according to respondents (1 – least impact, 5 – greatest impact)

<i>Activities/degree of impact</i>	1	2	3	4	5
<i>Non-environmental heat sources in buildings</i>	2	6	19	17	6
<i>Mass tourism</i>	5	9	26	5	5
<i>Burning of fossil fuels</i>	1	4	16	17	12

<i>Cutting down of forests</i>	0	1	3	11	35
<i>Intensive animal husbandry</i>	2	14	11	13	10
<i>Pollution by pesticides used in agriculture</i>	0	7	14	23	6
<i>Improper waste management</i>	0	1	7	18	24
<i>Excessive urbanization</i>	0	2	15	18	10
<i>Consumerism</i>	0	2	15	18	15
<i>Unsustainable urban transportation</i>	3	6	23	11	7
<i>Unsustainable private transportation</i>	4	8	15	14	9
<i>Unorganic delivery of purchased goods</i>	3	9	22	13	3
<i>Unorganic packaging of purchased goods</i>	3	6	13	16	12
<i>Unintelligent and non-ecological warehouses</i>	4	11	19	12	4

Source: own elaboration based on primary research results

The majority of respondents believe their actions can help improve the environment (Figure 3). Forty percent of respondents believe rather yes, 20% say yes, and 14% are definitely sure of the impact. However, 14% are rather skeptical about the possibility of their actions having an impact, and 2% strongly disbelieve in the possibility.

The results show that although most respondents have a positive attitude toward their own environmental impact, there is also a group of people who are more skeptical or uncertain. This may be due to a variety of factors, such as lack of knowledge about the effects of one’s own actions, lack of confidence in the effectiveness of individual actions in the context of global environmental problems, or a sense of powerlessness in the face of the scale of the problem. It is important to continue education and public awareness of the impact of individual actions on the environment, and to promote pro-environmental behavior that can help improve our environment.

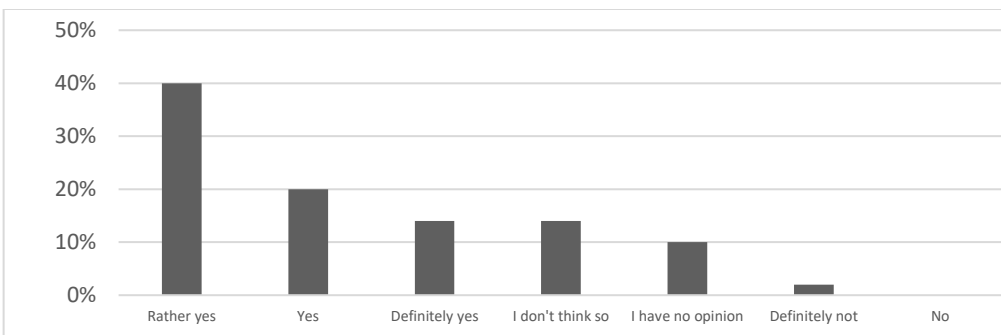


Figure 3. Distribution of the answer to the question: "Do you think that you can contribute to the improvement of the state of the environment with your actions?"

Source: own study based on secondary sources

As Figure 4 indicates, respondents are divided on the willingness to pay more for environmentally friendly products and those that support social causes. Twenty-two

percent say they would rather do so, and 14% say they would, while 2% are definitely willing to pay more. At the same time, 18% of respondents are rather unwilling to pay higher amounts, and 4% strongly refuse to do so. Thirty percent of respondents have no opinion on the subject. However, a study by Wierzbiński *et al.* (2021) found that young Polish consumers reject the offer of cheap mass-produced food and are willing to pay 50% more in exchange for guaranteed access to high-quality food products.

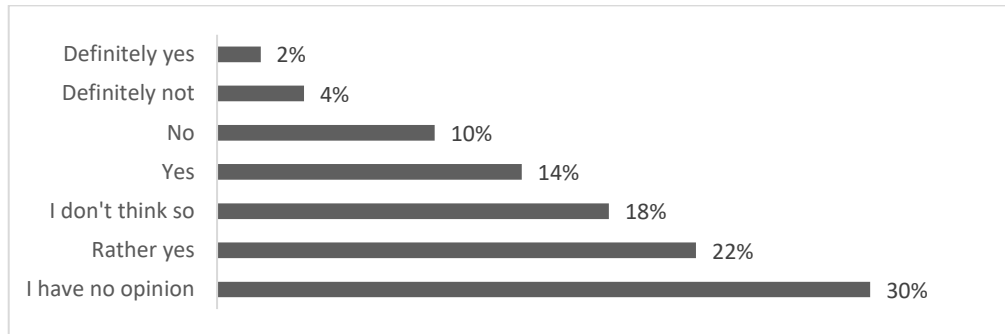


Figure 4. Distribution of the answer to the question: "Do you declare your desire to pay higher amounts for environmentally friendly products and for products that support social goals?"

Source: own study based on secondary sources

Daily environmentally friendly practices are fairly common among respondents (Table 4). The most common practices are extinguishing lights (88%), using reusable bags (86%) and separating trash (84%). Saving water is common in 76% of cases. Seventy percent of respondents drink tap water and choose more environmentally friendly forms of delivery of purchased goods. Sixty percent do not waste food, and just over half limit throwing things away and return electronic garbage to special points. Less commonly practiced actions include purchasing recyclable products (34%), limiting the use of a private car in favor of public transportation, walking or cycling (32%), limiting meat in the diet (30%), choosing eco-friendly urban transportation (6%), and car sharing (8%).

The results presented are in line with the report on Poles' eco-consciousness (Ministerstwo Klimatu i Środowiska, 2021), where almost all respondents declare they regularly segregate waste (96%), pay attention to reducing water consumption (more than 90% of indications) and choose ecological solutions, even when it means an additional cost (82%). Sixty-one percent of respondents said they could use a bicycle or public transport instead of a car. Moreover, more than 95% of Polish residents declared that they save energy at home. The most frequently indicated ways of saving energy are turning off lights in unused rooms, using energy-efficient light sources or buying energy-efficient household appliances. In addition, a third of respondents plan to take additional measures to increase energy efficiency and reduce energy bills. These individuals most often plan to use renewable energy sources. More than three-quarters of respondents are willing to spend more on "clean" energy.

Table 4. Distribution of the answer to the question: "Which of the following pro-ecological activities are you practicing in everyday life?"

Activities	Answers	%
Purchase and sale of used clothes stationary or on internet platforms	22	44%
Extinguishing lights	44	88%
Water saving	38	76%
Sorting garbage	42	84%
Drinking tap water	35	70%
Using reusable water bottles	41	82%
Using reusable bags	43	86%
Limiting the use of a private car for public transport, walking, cycling	16	32%
Choosing an ecological means of urban transport (e.g., electric vehicle)	3	6%
Sharing a private car with others driving in the same direction (carpooling)	4	8%
Not wasting food	30	60%
Donating electronic garbage to special points	26	52%
Limiting the throwing out of things (maximum use, selling, transfer)	25	50%
Limiting meat in the diet	15	30%
Acquiring recycled products	17	34%
Selection of more environmentally friendly forms of delivery of purchased goods (e.g., personal pickup, parcel machine, pickup point, courier using electric vehicles)	35	70%

Source: own study based on secondary sources

When making purchases, the majority of respondents are unsure about choosing products offered by companies actively working to protect the environment. Twenty percent of respondents usually choose such products, while 6% definitely choose them. Thirty-eight percent of respondents have no opinion on the subject, while 24% tend not to choose such products, and 10% definitely do not. Two percent of respondents declare a definite lack of interest in the products of environmental companies. The distribution of responses is presented in Figure 5.

The results suggest that despite the growing popularity of organic products, there is a segment of the population that remains undecided or has doubts about their choice when shopping. It is worth noting that the degree of commitment to purchasing organic products may also be related to a number of factors, such as availability, price, quality, consumer awareness of environmental issues and the promotional activity of environmentally friendly companies.

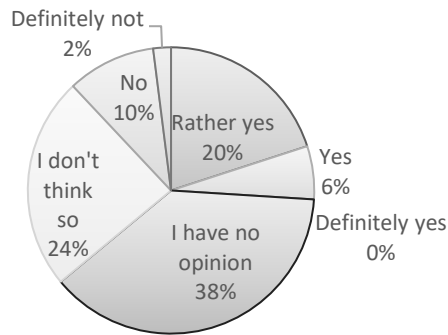


Figure 5. Distribution of the answer to the question: "Do you usually choose products offered by companies that are actively involved in environmental protection during purchases?"

Source: own study based on secondary sources

4. Sustainable logistics and business strategies

The results of surveys on respondents' environmental attitudes can have important implications for logistics and business strategies for companies. Increased environmental awareness among respondents can encourage companies to adopt more sustainable delivery and logistics practices. Companies may opt for greener delivery options or choose more efficient delivery routes, which can reduce CO₂ emissions and other negative environmental impacts. Organizations can also introduce more sustainable warehousing practices, such as using energy-efficient lighting systems or employing more efficient storage and picking methods. It would be worthwhile for companies to review their supply chains in an effort to select suppliers that also use sustainable practices. This can be important in terms of reducing the carbon footprint of the entire supply chain and promoting responsible social and environmental practices.

In addition, increased consumer interest in environmentally friendly products may prompt companies to adjust their offerings. Companies can begin to offer a wider selection of eco-friendly products that are more in line with customers' values and expectations. At the same time, they can make efforts to reduce packaging, use greener materials and invest in innovation in this area, including, for example, the development of biodegradable packaging, reusable packaging or packaging made from renewable materials.

Moreover, companies can employ pricing strategies that consider variations in consumers' willingness to pay more for sustainable products. Different product lines can be introduced, e.g. basic and premium, where premium products, at a higher price, offer a higher level of sustainability (e.g. biodegradable packaging, eco-certifications).

Educational campaigns are also interesting practices. Instead of focusing only on product promotion, companies can educate consumers about the benefits of sustainable choices. These campaigns can promote long-term changes in consumer behavior, encouraging greener purchasing decisions.

Additionally, companies should clearly communicate the added value of organic products, highlighting the benefits to both the consumer and the environment. Transparency about the costs associated with producing and distributing green products can help justify higher prices and increase customer acceptance. Regular reporting on sustainability progress, which should be made publicly available, can further enhance this transparency, building trust among consumers and investors alike. By setting clear sustainability goals and tracking their achievement, companies can not only demonstrate their commitment to sustainable practices but also use the insights gained to continually refine and improve their strategies. This integrated approach ensures that the value of sustainable products is fully communicated and understood, fostering long-term customer loyalty and investor confidence.

Furthermore, companies can actively engage in dialogue with policymakers, promoting regulations that support sustainable development. These can include initiatives to introduce tax breaks for companies using green technologies, as well as regulations that favor the development of infrastructure for sustainable transportation.

It is also worth considering participating in partnerships with government agencies, NGOs, and other organizations to jointly develop and promote sustainable practices. Such collaborations may include research and development projects, educational campaigns and initiatives to support local communities.

It is important to remember that an organization that takes environmentally friendly measures and offers environmentally friendly products can gain a positive image in the eyes of consumers. This can be helped by storytelling about the company's environmental activities, such as investments in renewable energy sources, environmental initiatives, or cooperation with local communities. Sustainability-based business strategies can be directed toward building a brand based on environmental values, which can bring both image and financial benefits.

5. Conclusions

The main objective of this survey is to analyze the sustainable behavior of young Polish consumers. The specific objectives are to find out the respondents' opinions on the most disturbing environmental phenomena and actions that negatively affect the environment. In addition, an important goal is to learn about their self-assessment of pro-environmental attitudes and to identify the pro-environmental actions most often taken by young consumers, as well as assessing the sustainable actions on logistics taken by companies.

The survey showed that the majority of respondents are positive about their attitudes toward the environment and recognize growing environmental and social problems. The most worrying issues are the increased amount of garbage, air and water pollution, and the presence of dangerous chemicals in everyday products. Respondents evaluated various activities that negatively affect the environment. The greatest impact was attributed to deforestation, improper waste management and consumerism. The majority of respondents believe their actions can help improve the environment and are willing to pay more for environmentally friendly products. Everyday environmentally friendly practices, such as turning off lights, using reusable bags and separating trash, are the most

common among respondents. When making purchases, respondents are often unsure about choosing products from environmentally friendly companies, indicating the need for more education and information about such products.

Among the practical implications of this work, the main point to note is the need to increase awareness of environmental activities and the benefits of choosing environmentally friendly products. Companies should promote their environmental activities more to attract conscious consumers. It is also important to encourage the development and implementation of technologies and practices that minimize negative environmental impacts. In addition, governments and organizations can support environmentally conscious consumer behavior through appropriate regulations and financial incentives. It is also important to facilitate consumer access to environmentally friendly products by improving their availability and visibility in stationary stores and online.

The study's limitations include the small sample size of the empirical study, as well as the limited nature of the survey questionnaire. In the future, it would be worthwhile conducting similar research with a larger survey sample, as well as enriching the study with the influence of sociological factors on pro-environmental consumer behavior.

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