

# CONSUMER PURCHASING DECISIONS IN THE CONTEXT OF KEY PACKAGING FEATURES AND INFORMATION CONTAINED ON FOOD AND COSMETIC PRODUCT PACKAGING PAPER

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**Abstract:** Product packaging serves a logistical function related to transport, storage, product safety, and information. Furthermore, packaging is an integral part of the product, but after use, it becomes unnecessary and, from this perspective, constitutes post-consumer waste, which in turn poses a threat to our environment. Therefore, in the context of sustainable development, limiting the negative impact of such packaging on our natural environment is crucial. Consumers themselves also play a significant role, as their purchasing decisions can influence producers' responsibility and the increasing prevalence of eco-friendly packaging. Therefore, researching consumer awareness is crucial to understanding how consumer purchasing decisions can support the concept of sustainable development in the context of packaging. The aim of this study is to analyze consumer opinions regarding the characteristics of cosmetic and food product packaging and the importance of information placed on such packaging for consumers when making purchasing decisions. The study utilized a survey method and also analyzed the survey results, allowing for the identification of consumer attitudes and opinions regarding the characteristics of cosmetic and food product packaging. Furthermore, it was determined which information presented on food and cosmetic product packaging is considered crucial by consumers when making purchasing decisions.

**Keywords:** packaging, purchasing decisions

## 1. INTRODUCTION

Rapid economic development, mass production, and growing consumerism are drastically impacting our natural environment [Steenis et al., 2017]. The concept of sustainable development is a response to the negative impact of human economic activity. This idea assumes meeting humanity's current needs without compromising the ability to meet the needs of future generations. This means that the use of dynamic economic development, including production, services, and consumption [Monteiro et al., 2019], should be achieved in a way that minimizes the consumption of natural resources and reduces waste. A key area where production and sustainability converge is packaging production. Consumers themselves play a significant role in achieving this balance, particularly their awareness of sustainable packaging and their purchasing behavior. The discussion in this



study is based on the literature on the subject and surveys. The research methodology is characterized and the obtained results are presented. The aim of this study is to analyze consumer opinions regarding the characteristics of cosmetic and food product packaging and the importance of the information provided on such packaging from the buyer's perspective.

## **2. THEORETICAL BACKGROUND**

Food and cosmetic packaging serves protective, logistical, and informational purposes. Furthermore, it plays an important role in marketing communication processes (Ankiel et al., 2021; Bojanowska and Sulimierska, 2023). Packaging is generally an integral part of many products on the market (Cichocka et al., 2020). The increasing production of goods such as food, cosmetics, and household chemicals, etc., is driving the development of packaging (Ankiel et al., 2021). Furthermore, the short life cycle of packaging generates many significant environmental problems that negatively impact our natural environment. In practice, packaging serves as a product, and when misused, it simply becomes waste (Kaźmierczak, 2022). Therefore, packaging constitutes post-consumer waste, which is the main source of waste generated in households. Therefore, the production of packaging is an increasing challenge, on the one hand, and on the other hand, the need to minimize the negative impact on the natural environment, which in the context of sustainable development is an important issue of packaging waste management (Jeżewska-Zychowicz & Jeznach, M., 2015).

Striving to minimize the negative environmental impact of packaging in the context of sustainable development can be achieved, among others, by selecting renewable materials, recycling, reducing packaging weight, using biodegradable materials while maintaining the packaging's function while meeting a number of requirements related to quality, safety, transport, storage, usability, ergonomics, visual appeal, etc. (Czarnecka-Komorowska and Wiszumirska, 2020). Building appropriate consumer attitudes through, for example, social campaigns supporting responsible consumption (Siuda, 2023). Hence, the concept of sustainable development can be applied to all stages of the packaging life cycle (Chirilli et al., 2022). One important way to support the idea of sustainable development is also to identify products that meet ecological criteria by placing ecological labels on packaging. Thanks to the use of eco-labels, consumers can decide at the purchasing stage whether they want to engage in waste prevention (Kaźmierczak, 2022). The foundation for implementing this process is knowledge of eco-labels and consumer preferences, which ultimately translate into purchasing decisions. When making purchases, consumers themselves pay attention to specific packaging features and the information provided on the packaging. Determining which packaging features are important to consumers and what information consumers look for on the packaging allows us to determine the criteria consumers use when making purchasing decisions. Furthermore, assessing knowledge of eco-labels also plays a role in identifying consumer purchasing decisions. This article addresses differences in the perception of product packaging in two product categories – food and cosmetics – by analyzing factors such as packaging features and the information provided on the packaging, which may influence consumer purchasing decisions.

### 3. RESEARCH METHODOLOGY

The aim of this study is to analyze consumer opinions regarding the identification of the most important features of cosmetic and food packaging and the importance of the information provided on this packaging from a consumer perspective when making purchasing decisions.

Table 1  
Characteristics of survey research

Objective scope	Features of food and cosmetic product packaging in the opinion of consumers  Identifying the most important information on packaging from the customer's perspective
Subjective scope	Consumers buying food and cosmetic products
Temporal scope	October 2025
Spatial scope	Southern Poland

Source: own study

For this study, we conducted our own research. The research tool was a self-constructed survey questionnaire consisting of a basic section and a personal profile. The survey contained a total of 34 substantive questions and four questions describing the demographic characteristics of respondents. A pilot study was conducted in October 2025. The characteristics of the survey are presented in Table 1.

Table 2  
Characteristics of respondents

Respondent demographic data		Number	Percentage
Gender	Men	46	26%
	Women	129	74%
Age	Over 65 years	4	2%
	56 to 65 years	10	6%
	46 to 55 years	65	37%
	36 to 45 years	33	19%
	25 to 35 years	30	17%
	18 to 24 years	33	19%
Residence	Rural area	52	30%
	City up to 50,000 inhabitants	23	13%
	City 50,000–200,000 inhabitants	39	22%
	City over 200,000 inhabitants	61	35%
Education	Higher education: Master's degree or higher	108	62%
	Higher vocational education	27	15%
	Secondary education	40	23%

Source: own study

The study was conducted on a sample of N = 175 respondents aged 18–65, residing primarily in the Silesian Voivodeship. Forty-six men and 129 women participated in the survey. The largest group consisted of respondents aged 46 to 55 (n = 65; 37%), while the smallest group consisted of those over 56 (n = 14; 8%). 108 (62%) respondents declared higher education (master's degree or higher). Higher education (bachelor's or

engineering) was declared by 27 (15%) respondents, and secondary education by 40 (23%). Detailed characteristics of the respondents are presented in Table 2.

#### 4. RESEARCH RESULTS

In the first stage of the analysis of the obtained data, it was determined whether the level of education of the respondents differentiated their responses regarding attitudes and behaviors related to product packaging. When examining respondents' attitudes and behaviors related to product packaging, we considered issues such as:

- frequency of paying attention to packaging while shopping;
- the impact of packaging appearance on product purchase;
- product safety and ease of use;
- preference for products in eco-friendly packaging;
- assessment/attitude toward the deposit-refund system.

As shown in Table 3, the most statistically significant differences appeared between individuals with at most secondary and higher education.

Table 3

Mann-Whitney U test scores for selected answers to questions about attitudes and behaviors related to product packaging depending on the respondents' education

Question	at most secondary/higher vocational		at most secondary/higher vocational		higher vocational	
	Z	p	Z	p	Z	p
How often do you pay attention to packaging when purchasing products?	-0.922	0.357	-2.106	0.035	-0.814	0.415
Does the appearance of the packaging influence your purchases?	0.726	0.468	-0.483	0.629	-1.270	0.204
Do you purchase goods—even those you hadn't planned on buying—based solely on the appearance of the packaging?	-1.318	0.188	-1.309	0.190	0.530	0.596
Can beautiful, attractive, and interesting packaging for a product you don't need encourage you to buy it?	-1.847	0.065	-1.414	0.157	1.033	0.302
Does the quality of the packaging influence the quality assessment of the product you buy?	-0.202	0.840	0.435	0.664	0.687	0.492
While shopping, are you more likely to choose a product whose packaging makes it easier to use?	0.396	0.692	-1.274	0.203	-1.523	0.128
Do you pay attention to the safety of the product in its packaging when shopping?	-0.627	0.531	-0.534	0.593	0.258	0.796
Does packaging simplify the purchasing process, for	1.060	0.289	-1.226	0.220	-2.658	0.008

example, by remembering its appearance and making it easier to find the product in the store?						
Do you read the information on the packaging of the products you buy?	-0.688	0.492	-0.534	0.593	0.299	0.765
Do you think manufacturers should provide short explanations or legends for symbols on the packaging?	-0.457	0.648	-2.877	0.004	-1.773	0.076
Do you prefer products in eco-friendly packaging?	-1.781	0.075	-3.681	0.000	-1.257	0.209
Do you ever decide not to buy a product because of its packaging?	-2.252	0.024	-3.858	0.000	-0.377	0.706
Do you use or have you used apps that facilitate healthier shopping when shopping for groceries?	0.041	0.968	-0.133	0.894	-0.176	0.861
Have you heard about the introduction of a deposit-refund system in Poland?	-1.666	0.096	-1.205	0.228	1.127	0.260
How do you feel about the idea of introducing a deposit-refund system for single-use bottles and cans?	-1.594	0.111	-2.967	0.003	-0.942	0.346
How often would you be willing to return deposit-refundable packaging to a collection point?	-1.853	0.064	-3.527	0.000	-1.240	0.215
Do you think a deposit-refund system will help reduce waste in public spaces?	-1.792	0.073	-2.930	0.003	-0.485	0.628

Source: own study

A statistically significant difference was confirmed between the assessment of the frequency of purchase cancellations due to packaging. Both individuals with higher vocational education ( $Z = -2.252$ ;  $p = 0.024$ ) and higher education ( $Z = -3.858$ ;  $p < 0.001$ ) reported this significantly more often compared to those with no more than a secondary education. Individuals with higher education rated the importance of packaging appearance and its recall significantly higher ( $Z = -2.658$ ;  $p = 0.008$ ) compared to those with higher vocational education. Moreover, people with higher education gave significantly higher ratings to the questions about paying attention to packaging during purchase ( $Z = -2.106$ ;  $p = 0.035$ ), the need to place symbols on packaging ( $Z = -2.877$ ;  $p = 0.004$ ), the preference for products in ecological packaging ( $Z = 3.681$ ;  $p < 0.001$ ), the assessment of the introduction of a deposit system for bottles ( $Z = -2.967$ ;  $p = 0.003$ ), their willingness to return products under a deposit ( $Z = -3.527$ ;  $p < 0.001$ ), and the recognition of the role of the deposit system in reducing waste ( $Z = -2.930$ ;  $p = 0.003$ ). The research shows that the level of education influences consumer attitudes towards attitudes and

behaviors related to product packaging, which is also confirmed by the research by Chirilli, C et al. 2022.

Table 3

Distribution of Wilcoxon test results for responses regarding the importance of individual packaging features when purchasing cosmetic products

Feature	Price	Size/ capa-city	Packaging aesthetics/ appearance	Ease of storage	Packaging durability and quality	Recyclability	Possibility of folding/ minimizing packaging after use	Packaging dimensions appropriate to the size of the product	Product properties
Practicality / ease of use	←	←	←	↑	↑	↑	↑	↑	↑
Price		←	←	←	←	←	←	←	←
Size/capacity			-	←	←	←	←	←	←
Packaging aesthetics/ appearance				↑	↑	↑	←	↑	←
Ease of storage					-	-	←	←	←
Packaging durability and quality						-	←	↑	←
Recyclability							←	←	←
Possibility of folding/minimizing packaging after use								↑	←
Packaging dimensions appropriate to the size of the product									-

Source: own study

The most important features of cosmetics packaging indicated by respondents were: practicality/ease of use (74.9%), price (54.3%), and size/capacity (42.3%). Product properties and the adequacy of packaging dimensions to size were by far the least frequently mentioned (one each). Red arrows indicate a statistically significant difference, and the direction of the arrow indicates the feature that was most frequently mentioned.

Table 4

Distribution of Wilcoxon test results for responses regarding the importance of individual packaging features when purchasing food products

Feature	Providing information about ingredients and nutritional values	Easy to open and close	Transparency/ability to see content	Ease of Storage	Convenient format (e.g. "to go" for re-closure)	Eco-friendliness (e.g. biodegradable packaging)	Eco-friendliness (e.g. biodegradable packaging)	Recyclable	No transport restrictions	I don't pay attention
Product freshness and protection	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
Providing information about ingredients and nutritional values		-	↑	↑	↑	↑	↑	↑	↑	↑
Easy to open and close			↑	↑	↑	↑	↑	↑	↑	↑
Transparency/ability to see content				-	-	↑	↑	↑	↑	↑
Ease of Storage					-	↑	↑	↑	↑	↑
Convenient format (e.g. "to go" for re-closure)						↑	↑	↑	↑	↑
Eco-friendliness (e.g. biodegradable packaging)							-	-	↑	↑
Eco-friendliness (e.g. biodegradable packaging)								-	-	↑
Recyclable									-	↑
No transport restrictions										-

Source: own study

The most important features of food packaging indicated by respondents were: freshness and product protection (73.7%), information about ingredients and nutritional values (56.0%), and ease of opening and closing (46.9%). The absence of transport restrictions was cited least frequently (2.9%), with only one respondent indicating they did not pay attention to this.

Analyzing the results regarding the characteristics of food and cosmetic packaging, it can be concluded that consumers prioritize such aspects as ease of use, price, size and capacity (cosmetic), product protection, nutritional information, and ease of use over environmental considerations. This conclusion aligns with the results of the study by Żbikowska et al., 2022.

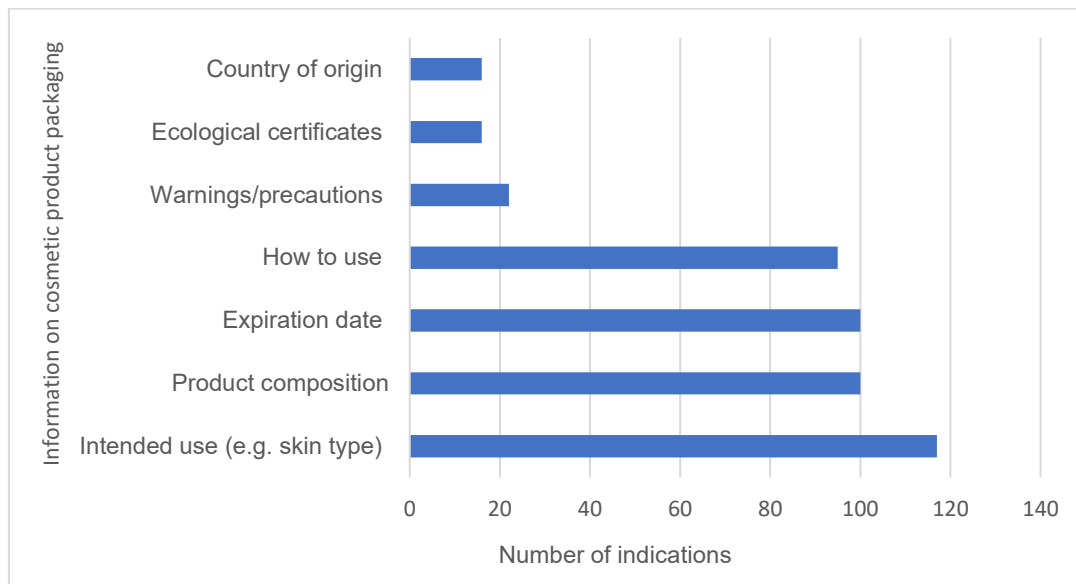


Fig. 1. Assessment of the importance of selected information included on cosmetic product packaging in the opinion of respondents

The next question concerned the importance of selected information on cosmetic product packaging (fig. 1). The results are consistent with the 2019 study by Młoda-Brylewska, in which ingredients and intended use also received the highest response from respondents.

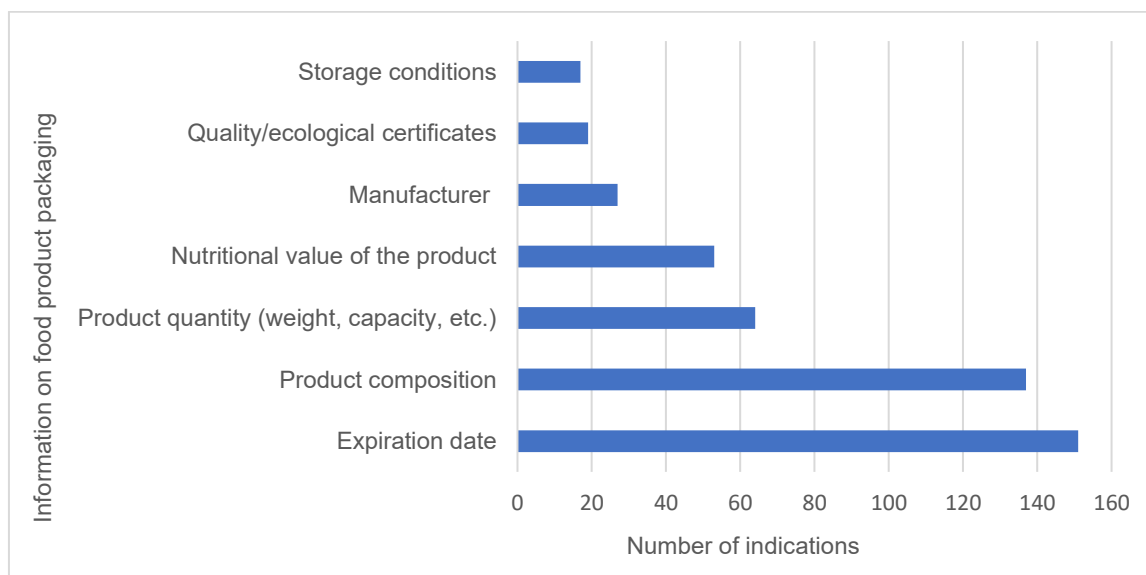


Fig. 2. Respondents' assessment of the importance of selected information on food packaging

In the case of food packaging, the most frequently cited information by respondents included the expiration date, ingredients, product quantity, and nutritional value (fig. 2).

The results are similar to those reported by other authors (Gniedziejko and Lesiów, 2018; Nosecka, 2015).

The results regarding the most important information on food and cosmetic packaging, as perceived by respondents, indicate that consumers still prioritize convenience, price, and expiration dates over environmental concerns (Ketelsen et al., 2020).

## 5. CONCLUSION

The aim of this study was to analyze consumer opinions regarding the most important features of cosmetic and food packaging and to identify information that, from a buyer's perspective, plays a key role in making purchasing decisions. The research results presented in this article showed that while consumers recognize the importance of a sustainable approach to packaging, in practice, functional and utilitarian criteria are more important when making purchases. Among the most frequently cited features of cosmetic packaging, practicality and ease of use, price, and size/capacity were most frequently cited. For food products, the highest-rated features were: freshness and product protection, information regarding ingredients and nutritional values, and ease of opening and closing the packaging. These results confirm that in both product categories, environmental aspects remain less important than functionality or usability. In terms of the most important information displayed on cosmetic products, the product's intended use, composition, and expiration date are of key importance to consumers. In the case of food products, key information from a consumer perspective includes expiration dates, product composition, quantity, and nutritional value.

Statistical analysis also revealed that education level significantly differentiates some consumer attitudes. People with higher education are more likely to choose a product over another because of its packaging, more often prefer eco-friendly packaging, and more consciously assess the deposit-refund system as a tool for waste reduction. These results indicate that a higher level of education promotes greater environmental sensitivity and greater consumer engagement in responsible purchasing decisions.

The study has certain limitations. The first limitation relates to its geographic scope. The research sample primarily covered a single region of Poland, which cannot be used to generalize the results to the entire population. Second, the study was declarative in nature, which carries the risk of discrepancies between consumers' declarations and their actual purchasing decisions. Another limitation is the lack of consideration for differences in household income, which could potentially influence preferences for packaging features and attitudes toward eco-friendly packaging. Furthermore, the significant predominance of women in the study sample limited the ability to clearly assess whether gender, a demographic variable, differentiates preferences for packaging features and important information on product packaging.

## REFERENCE

- Ankiel, M., Wojciechowska, P., & Wiszumirska, K., 2021. *Innowacje opakowaniowe na rynku produktów konsumpcyjnych*, Uniwersytet Ekonomiczny w Poznaniu, Poznań.
- Bojanowska A, Sulimierska A., 2023, *Consumer Awareness of Biodegradability of Food Products Packaging*. Sustainability. 2023; 15(18):13980. DOI: 10.3390/su151813980
- Cichocka, I., Krupa, J., & Mantaj, A., 2020. *The consumer awareness and behaviour towards food packaging in Poland*, Economics & Sociology, 13(2), 304-317, DOI:10.14254/2071-789X.2020/13-2/20

- Chirilli, C., Molino, M., & Torri, L., 2022. *Consumers' Awareness, Behavior and Expectations for Food Packaging Environmental Sustainability: Influence of Socio-Demographic Characteristics*. *Foods*, 11(16), 2388, DOI: 10.3390/foods11162388
- Czarnecka-Komorowska, D., & Wiszumirska, K., 2020. *Zrównoważone projektowanie opakowań z tworzyw sztucznych w gospodarce cyrkularnej*. *Polimery*, 65(1), 8-17, DOI: 10.14314/polimery.2020.1.2
- Gniedziejko, M., & Lesiów, T., 2018. *Zachowania konsumenckie związane z wyborem mlecznych produktów light i ich uwarunkowania*, *Nauki Inżynierskie i Technologie*, 4(31), 30-51, DOI: 10.15611/nit.2018.4.02
- Jeżewska-Zychowicz, M., & Jeznach, M., 2015. *Consumers' behaviours related to packaging and their attitudes towards environment*, *Journal of Agribusiness and Rural Development*, 37(3), DOI: 10.17306/JARD.2015.47
- Każmierczak, M., 2022. *Ekologistyka a rozwój opakowań w łańcuchu dostaw*. Cz. 1, *Gospodarka Materiałowa i Logistyka*, (1), 21-35, DOI: 10.33226/1231-2037.2022.1.3
- Ketelsen, M., Janssen, M., & Hamm, U., 2020, *Consumers' response to environmentally-friendly food packaging-A systematic review*, *Journal of Cleaner Production*, 254, 120123, DOI: 10.1016/j.jclepro.2020.120123
- Młoda-Brylewska, K., 2019. *Czynniki wpływające na zwracanie uwagi przez konsumentów na informacje zamieszczone na opakowaniach produktów kosmetycznych (w:)*. *Nauka, Badania i Doniesienia Naukowe*, red. T. Wysoczański, *Idea Knowledge Future*, Świebodzice.
- Monteiro, J., Silva, F. J. G., Ramos, S. F., Campilho, R. D. S. G., & Fonseca, A. M., 2019. *Eco-design and sustainability in packaging: A survey*, *Procedia Manufacturing*, 38, 1741-1749, DOI: 10.1016/j.promfg.2020.01.097
- Nosecka, B., 2015. *Rola informacji na etykiecie w procesie zakupu produktu żywnościowego*, *Roczniki Naukowe Stowarzyszenia Ekonomistów Rolnictwa i Agrobiznesu*, 17(3), 290-296.
- Siuda, D., 2023. *Wpływ proekologicznego charakteru opakowań na intencje zakupowe i wizerunek marki*. *Marketing i Rynek*, (3), 22-32, DOI: 10.33226/1231-7853.2023.3.2
- Steenis, N. D., Van Herpen, E., Van Der Lans, I. A., Ligthart, T. N., & Van Trijp, H. C., 2017. *Consumer response to packaging design: The role of packaging materials and graphics in sustainability perceptions and product evaluations*, *Journal of cleaner production*, 162, 286-298, DOI: 10.1016/j.jclepro.2017.06.036
- Żbikowska, A., Sokół, A., Sowiński, M., Szymańska, I., Marciniak-Łukasiak, K., & Żbikowska, K., 2022. *Analiza poglądów konsumentów na temat opakowań do żywności – badania wstępne*, *Przemysł Spożywczy*, 76, DOI: 10.15199/65.2022.7.7