
Packaging as a Source of Information on the Product in Food Purchasing Decisions: The Case of Poland

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Abstract:

Purpose: The article aims to identify, analyze and determine the key information placed on food packaging, which constitute the informative value of packaging in the context of the impact on the purchasing decisions of food products by housewives in Poland.

Design/Methodology/Approach: The conducted analysis assumed that in the food purchasing process the consumer perceives and analyzes selected information encoded on food packaging (both obligatory and optional). Determinants of the informative value of food packaging influencing purchasing decisions were identified during the study - an individual categorized interview, which was carried out among women - housewives in Poland (N = 900) in 2019.

Findings: The analysis of the results of the study with the use of basic techniques for assessing the significance of variables and exploratory factor analysis made it possible to identify key information on the packaging of food products that affect the purchasing decisions of housewives in Poland. The identified key information allowed us to develop determinants of the informational value of food packaging in the context of the impact on the purchasing decisions of consumers in Poland.

Practical Implications: The identified determinants of the informational value of food packaging are a valuable guide for entities placing food on the market in terms of packaging design, in particular, the appropriate selection of optional information as well as the legibility and reliability of labeling packaging with obligatory information.

Originality/Value: The conducted identification and analysis of the key determinants of the informational value of food packaging may be a reference point for packaging of non-food products (cosmetics, household chemicals, dietary supplements, OTC drugs).

Keywords: Informative value, packaging, consumer decision, purchasing process, determinants of information value, factor analysis, food products.

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1. Introduction

Unit packaging is an integral part of a food product, allowing for its commodity trading (Ankiel and Grzybowska, 2020). Contemporary food packaging fulfills numerous functions, such as: protective, logistic, information, marketing, economic, ecological, and functional (Ankiel-Homa, 2012; Wyrwa and Barska, 2017). In the purchasing and consumption process, packaging fulfills three functions: commercial (product identification, communication, product positioning), physical (product protection, transportation) and social functions (environmental friendliness) (Rundh, 2005). It is important to underline the fact that in many cases the packaging takes on the role of the main communication channel between the producer and the consumer (Vieira *et al.*, 2015).

A study by Chandon and Wansink (2010) indicated that messages on product packaging reach consumers more effectively than from advertising messages, influence brand perception and ultimately purchasing decisions. The informative function of the packaging identifies the product and brand and distinguishes the product from the competitive offer (Barska and Wyrwa, 2017). The information function of packaging is the basic, most important function, because it is crucial in identifying the features and properties of the product, providing knowledge to the consumer, and indicating the proper handling of the product in the process of storage or consumption (Clement *et al.*, 2016; Wyrwa and Barska, 2017). The analysis of the results of the conducted research indicates an existing research gap in the form of identification of key information contained on the packaging, which, due to its utilitarian nature, would constitute the basis for the informational value of packaging, regardless of the food product category. The authors undertook to conduct research to identify, analyze and evaluate the key determinants of the informational value of food packaging in Poland.

2. Literature Review

The literature emphasizes the growing role of unit packaging as a message in marketing activities, and at the same time an important factor influencing the purchasing decisions of consumers, especially regarding the purchase of consumer food products, especially in large-format stores with a self-service form of sale (Cahyorini and Rusfian, 2011; Mead and Richerson, 2018).

Properly designed food packaging plays an important role in the purchasing behavior of consumers, in particular, in the process of making purchasing decisions, influencing the cognitive, affective and behavioral sphere of the individual consumer (Orth and Malkewitz, 2008; Deng and Kahn, 2009; Hanzae and Sheikhi, 2010; Goryńska-Goldmann and Gazdecki, 2016; Jakubowska and Radzyńska, 2019; Rambabu and Porika, 2020). From the consumer's point of view, packaging is a source of important information about the product, which is of particular importance

in the purchasing process undertaken at self-service points of sale (Wang, 2013; Manijeh and Azadeh, 2017; Bigoin-Gagnan and Lacoste-Badie, 2017; Mruk-Tomczak *et al.*, 2019). In the case of rash purchases (impulse, habitual) made in large-scale points of sale, the unit packaging of the product is a “silent seller”, and the packaging design elements (shape, colors, information, decorations, type of closure, etc.) attract attention, influence the perception of features and attributes of a food product and ultimately determine the selection of a specific product within a competitive offer (Reutskaja *et al.*, 2011; Wikström *et al.*, 2014; Pilelienė and Grigaliūnaitė, 2017; Kuchraska, 2019). Visual attention is crucial in purchase decisions. Modern distribution channels require food unit packaging to possess (in addition to ensuring product safety, modern design, interesting structural and graphic solutions, high usability for the consumer and environmental friendliness) high communication values (Grundey, 2014; Auttarapong, 2012; Barska and Wyrwa, 2017; Grzybowska-Brzezińska *et al.*, 2020; Wierzejski *et al.*, 2020).

The purpose of the informative function of packaging is to provide the consumer with reliable and comprehensive information about the characteristics, properties and attributes of a food product, which are necessary when a person is attempting to make the right choice and purchase decision (Azman and Sahak, 2014; Dörnyei and Gyulavári, 2016). Information on food packaging can be encoded in the form of linguistic signs (such as words, expressions and ideographic signs, such as numbers, combinations of letters and numbers) and/or iconic signs (photographs, drawings and other graphic signs) (Ankiel-Homa, 2012; Ankiel and Grzybowska-Brzezińska, 2020). Based on the information placed on unit packages, the consumer decides to buy a specific product within a specific food category or to refrain from purchasing it. In addition, the information on the packaging or label creates the image of the product/brand, indicates the specific qualities of the product (e.g. health claims), therefore they must be comprehensive, understandable, hence making them the subject of numerous consumer studies (Andrews *et al.*, 2011; Hawley *et al.*, 2012; Droulers and Amar, 2015; Bialkova *et al.*, 2016; Dörnyei and Gyulavári, 2016; Fenko *et al.*, 2016).

In the purchasing process, the consumer analyzes only selected components that constitute the informational value of the packaging (it depends on the satisfied need, food category, brand, urgency of purchase and the place of sale of the product). Therefore, it is legitimate to identify key information on the packaging that is perceived in the purchasing process and influences consumers’ purchasing decisions about food products.

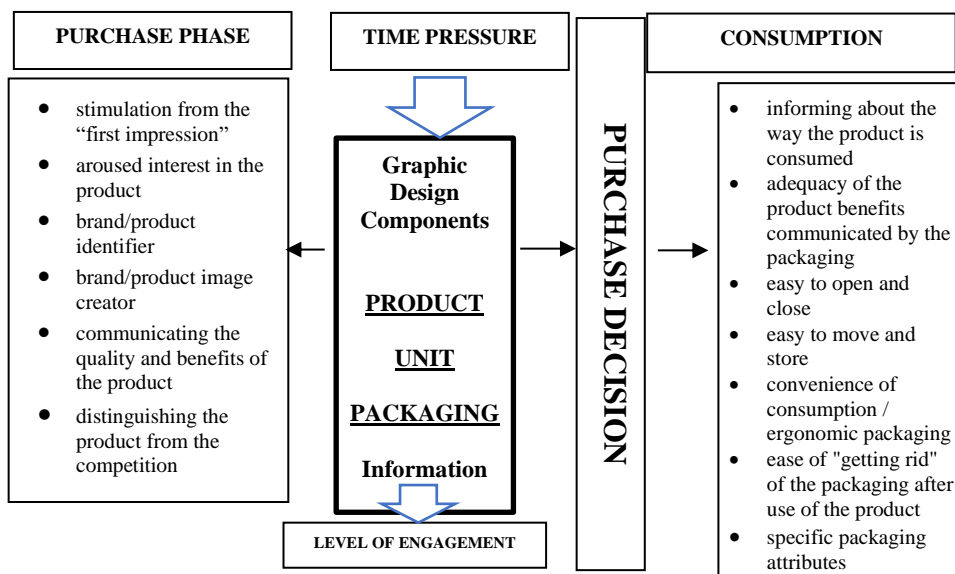
3. Packaging as a Carrier of Information about a Food Product

As already mentioned, unit packaging of consumer products (including food) plays a key role in making purchasing decisions by consumers. On the basis of the conducted research, Magnier and Crié (2015) emphasize the importance of packaging in the

purchasing decisions of consumers: “it also seems very important for brands to focus on the aesthetic appearance of their eco-designed package, because it plays a major role in quality perception and purchase intention”. The role of unit packaging in the process of purchasing consumer products can be reduced to treating the packaging as a factor that, through its features and attributes, is designed to evoke a specific image of itself, as well as of the packaged product, causing the consumer to assign certain values to the product, which are likely to bring specific benefits (functional, emotional, economic, ecological, health, technical, social, cultural) (Ankiel-Homa, 2012; Rundh, 2015). A model approach to the role of packaging in the consumer’s purchasing process is presented in Figure 1. One of the key functions fulfilled by the unit packaging of a food product is its informational element. The packaging should provide the consumer with ample information regarding the features and properties of the product, packaging features, product storage conditions or the method of packaging disposal after the product has been used. Coded information is part of the informative value of a package, which depends on the legibility, reliability, and effectiveness of the message. Due to the obligatory nature of the information encoded on the packaging, the following are distinguished:

- obligatory information that must be placed on the packaging in accordance with the legal legislation in force in a given country (or in the European Union);
- optional information, the placement of which on the packaging is voluntary and dependent on the entity introducing the product to the market (it is usually information of a marketing nature) (Ankiel-Homa, 2012).

Figure 1. The role of product packaging in purchasing and consumption decisions



Source: Ankiel -Homa, 2012, p. 36.

Marking and labeling of packages has a direct impact on the purchasing behavior of consumers. On the other hand, Behzad (2014) indicates that, in addition to information, the graphics, design and color of the packaging contribute to the success of the product and brand (Behzad, 2014).

In addition to the mandatory information, the manufacturer / placing the product on the market may provide additional, non-mandatory information of a marketing and educational nature. These include information:

- emphasizing the specific, distinctive features and attributes of the product (eg product certificates, recommendations of market institutes);
- creating the desired image of the product and the brand of the food product (eg decorations, ornaments and other linguistic and graphic signs);
- informing about promotional activities related to the food product (eg a QR code redirecting to the advertisement of the product, fan page) (Ankiel and Grzybowska-Brzezińska, 2020).

Communication elements (including informational packaging) and their impact on consumers' purchasing decisions have been the subject of many studies (Garber *et al.*, 2008; Otterbring *et al.*, 2013; Hota and Charry, 2014).

The results of research on the perception and analysis of information on packaging by consumers, where the text (linguistic) and iconic (graphic) signs are distinguished, indicate that graphical signs are easier to perceive (Graham *et al.*, 2012). On the other hand, in research on the perception and analysis of information (encoded in the form of linguistic signs) on the packaging, the key turns out to be information on the features and properties of the product and storage methods (which depends on the product category) (Wyrwa and Barska, 2017). Most consumers have shown that they use label information but would like it to be simpler. Linguistic signs, symbols, logos and all information on packaging influence the perception of food characteristics and properties, and some (e.g. environmental information) increase consumer confidence in the product (Taufique *et al.*, 2019; Eldesouky *et al.*, 2020).

4. Materials and Methods

The main purpose of the study was to identify the importance of information on food packaging (labels) in Poland for housewives. The choice of housewives as a source of information resulted from the fact that they are decision-makers in the household, i.e. they make purchases on their own or indicate to other members of the household the type of purchases. The conducted research procedure allowed for the identification and determination of the value of the information, i.e. the indication of the most important information determining decisions to purchase food products. The study was conducted using the direct interview method categorized throughout Poland in the period from April to May 2019. The research tool was an interview questionnaire

prepared and verified in the pilot. The studied population consisted of women - housewives declaring a systematic purchase of food products. The selection of the research sample (N = 900) was carried out using the quota sampling method (selection criteria: age and place of residence), which met the postulate of 'maintaining relative' representativeness of the research population. In assessing the importance of the information extracted on the packaging, a classic five-point Likert scale, called by G.A. Churchill using the category rating scale (Churchill, 2002). It was treated as an interval scale in which the intervals between individual numbers, treated as differences in assessment, are significant.

Thus, this approach made it possible to adopt, in the analytical procedure, as one of the evaluation criteria, the significance of the arithmetic mean information from the total scores obtained (Sullivan and Artino, 2013; Lušňáková *et al.*, 2019). In addition, the collected empirical material was analyzed based on other more specialized analytical tools, such as the Relative Importance Index, Henry Garrett Ranking Method and Exploratory Factor Analysis.

A two-step approach was used to examine the meaning of the signs on the packaging, including product information. In the first stage, apart from the arithmetic mean, two methods were used that are relatively simple in calculations, but most of all very practical and often used in determining the preferred features, elements and marketing tools by consumers (buyers), namely the Relative Important Index (RII) (Aziz *et al.*, 2016) and Garrett's ranking method (Kalvakolanu *et al.*, 2019). These methods made it possible to confront the value estimates for housewives obtained based on the arithmetic mean with the value indicators calculated based on the procedures presented below. The index RII was computed using formula:

$$RII_i = 1n_1 + 2n_2 + 3n_3 + 4n_4 + 5n_5 / 5(n_1 + n_2 + n_3 + n_4 + n_5); \text{ where: } i = 1, 2, \dots, 26.$$

RII_i - is Relative Importance Index for each factor, while n₁, n₂, n₃, n₄, n₅ are the numbers of indication on scored 1, 2, 3, 4 or 5 and where 1 = no impacts, 2 = negligible impact, 3 = marginal impact, 4 = moderate impact and 5 = major impact. In quantitative research, if the differences between the scale are equal, then one can assume that it is approaching numbers with metric properties. The Relative Importance Index (RII) was calculated for each of the information on the package to isolate the most significant among those listed.

In the case of Garrett's method, the Likert scale rating values were used as the rank for all factors and the outcomes of such ranking was converted into score value with the help of the following formula:

$$\text{Percent Position} = 100 (R_{ij} - 0.5) / N_j,$$

where: R_{ij} = rank given for the *i*th variable by *j*th respondents; N_j = the number of variables ranked by *j*th respondents.

Next with the use of Garrett's Ranking Conversion Table, the percent position estimated is converted into scores and for each factor, the scores of each individual are added. Then the total value of the scores and mean values of score was calculated. The factors having the highest mean value is the most important factor (Dhanavandan, 2016).

In the second stage, the exploratory factor analysis method was used to unambiguously determine the most important variables (including the ones indicated above) and the substantive properties of the information significance due to the fact that a large set of analyzed information was accepted on the packaging and to reduce the controversial use of various techniques. An important aspect of choosing this method was also obtaining confirmation of the properties and validity of the interpretation of the evaluation values resulting from the obtained results of the analytical techniques used and in the case of each of the tested information placed on the packaging. Moreover, it is important that in this method no hypotheses are made about any relationships between the variables that would explain the correlations between the variables (Balicki, 2013).

5. Results and Discussion

As already mentioned, one of the main objectives of the study was to identify key information (by assigning values on a scale from 1 to 5) placed on unit packages in the context of their importance in the process of purchasing food products by housewives in Poland. Unit packaging of food products is a carrier of information (obligatory and optional) and it is obvious that the purchasing context means that not all of them are analyzed in the product selection process and not all of them affect the consumer's purchasing decisions (mainly due to time pressure, but also often due to the lack of consumer knowledge).

Therefore, it is fully justified to identify the information that is significant for the consumer and of value for him, i.e. how it is perceived and analyzed by him in the process of purchasing food. This is particularly important in the context of the "excess" of optional information on packages, and therefore indicating which of them are of particular importance to the consumer. Thus, it can be a valuable guide for producers/entities introducing the product to the market in terms of selecting optional information elements and reducing the asymmetry of information in the relations: producer-consumer or packaged product-consumer. The study evaluated 26 categories of information elements on food packaging, the importance of which for housewives, as mentioned above, was measured using the Likert scale⁴. The three techniques for assessing the importance of information on packaging for housewives

⁴ Likert scale values: (1) definitely unimportant, (2) invalid, (3) neither yes nor no, (4) important, and (5) definitely important.

used during the analysis of the research results allowed to determine their place in the ranking and a certain hierarchy (Table 1).

It should be emphasized that each of the calculation techniques used in a different aspect presented the assessment dimension: as an average of the obtained scores, as a relative indicator and as a value expressed as a percentage (all of them were the basis for determining the significance ranking). Both the arithmetic mean, the relative importance index, and the Garrett method obtained similar results. The most important for housewives is information on the shelf life of the product, product composition and storage conditions.

This information belongs to the obligatory category and is of key importance in the process of purchasing and consuming food, mainly due to the minimization of health risks (related to e.g. consumption of an expired product or consumption of a product containing an allergen that is strong for the consumer). The second most important group are: price and storage method. When analyzing the above, it can be noticed that both the product storage conditions and the nutritional value of the product are also key information in the process of purchasing and consumption of the product and - as in the case of the highest-rated information - may affect the minimization of health risk. On the other hand, the suggested price of the product (if it is placed on the packaging) is a key economic determinant of purchase, but due to the different pricing strategies of producers and distributors and quite frequent changes of its level, it rarely appears on the packaging/label as a permanent element.

Table 1. Indicators of the relative importance of information on packaging (comparative analysis)

PACKAGE ELEMENTS (INCLUDING INFORMATION)	Value the total average	Index relative importance	Garret's method (%)
1.name of the product	3.75	0.750	58.1
2.product ingredients	4.34	0.855	66.3
3.producer/marketer	3.31	0.662	53.3
4.brand	3.48	0.742	55.2
5.date of mini durability/use-by date	4.49	0.898	67.9
6.storage conditions	3.98	0.795	61.3
7.net content/number of items	3.63	0.727	57.1
8.the product's nutritional value	3.93	0.785	60.8
8.1.fat content	3.75	0.749	58.5
8.2.carbohydrate content	3.70	0.739	57.9
8.3.protein content	3.66	0.798	57.5
8.4.salt content	3.69	0.738	58.0

8.5.energy value	3.67	0.734	66.6
8.6.How many of the daily requirements (%) are met	3.27	0.654	53.1
9.daily intake	3.26	0.653	53.0
10.price	3.92	0.787	60.7
11.storage conditions	3.81	0.762	59.3
12.health/nutritional claims	3.42	0.683	54.6
13.information about the product	3.29	0.530	53.1
14.infographics	3.11	0.609	51.9
14.1.product certificates	3.10	0.630	51.1
14.2.packaging material	3.15	0.559	57.8
14.3.quality assurance	3.24	0.528	52.5
14.4.manufacturer's website	2.64	0.494	45.6
14.5.QR codes	2.47	0.516	43.7
14.6.barcodes	2.59	0.511	45.0
15.graphic design	2.55	0.750	44.6

Source: Own research.

In turn, according to the surveyed housewives in Poland, the categories of information placed on the packaging that have the least impact on the choice and purchasing decision of food (in the case of calculations of each technique) include: QR codes, drawings and decorations, bar codes and the manufacturer's website. All these categories of information are optional, and their placement is an arbitrary decision of the entity that markets the product.

It is worth noting, however, that QR codes and the manufacturer's website, as information about a typical marketing message, are of little importance in the process of choosing and purchasing food products, but may be important in the consumption process if the consumer would be interested in taking part in an advertising campaign engaging the customer (redirection with a QR code to the promotion regulations or to the manufacturer's website or obtaining comparative information with products of other manufacturers). In the case of barcodes, their importance in the process of commodity trading is fundamental and in the current market reality they are an obligatory part, but for an individual consumer, they are practically irrelevant. On the other hand, graphics mainly increase the visual attractiveness and attract the interest or attention of buyers.

Therefore, in the context of the excess of signs and codes placed on the packaging of food products, it is important to properly select optional information and visualize them so that only those important for the consumer are placed and positively influencing the process of assessing the value and communicative purity of the packaging or label of the food product.

The applied research techniques made it possible to obtain comparative results in the confrontation, but in general, the obtained results of the calculations can be considered as convergent. Despite some differences, the most valuable elements of packaging for housewives in Poland in the process of making purchasing decisions in the case of food products are: product composition, shelf life, storage conditions, the nutritional value of the product and storage method. Housewives in Poland also drew attention to the price of the product, but as mentioned above, it is very rarely a permanent element of the label/packaging (as a rule, it is located on a store shelf). Moreover, it can be concluded that, in particular, the index of the relative importance of the variable and the Garrett ranking method constitute very useful and relatively simple tools in examining the importance of factors in the processes of making purchasing decisions.

Due to the fact that a large set of analyzed variables (elements of labels/packaging) is accepted and the use of various techniques is debatable, the most important variables (including those indicated above) and the substantive properties of the assessment of the importance of the information constituting the value of the information on the label/packaging, were determined using the method of exploratory analysis factor. An important aspect of selecting this method was also obtaining confirmation of the properties and validity of the interpretation of the evaluation values resulting from the obtained results of the analytical techniques used and in the case of each of the tested label elements. Moreover, it is important that in this method no hypotheses are made about any relationships between the variables that would explain the correlations between the variables (Balicki, 2013). In accordance with the procedure for verifying the correctness of the application of this method, Bartlett sphericity tests were carried out and the Kaiser-Meyer-Olkin index was calculated.

Table 2. *KMO index and Bartlett's test*

Measure of Kaiser-Meyer-Olkin drawing adequacy		0.928
Bartlett sphericity test	Approximate Chi-square value	12319.343
	Degrees of freedom (df)	351
	Significance	.000

Source: Own research.

The obtained KMO value above 0.9 fully confirmed the legitimacy of the use of exploratory factor analysis, i.e. in this case the level of correlation between the factors is high. In addition, Varimax factor load rotation was used as part of it. The study identified the main factors relating to the information presented on the packaging of food products and influencing purchasing decisions (using the Kaiser criterion). In the case of the Kaiser criterion, it is assumed that if a given component explains more variance than a single variable, i.e. the eigenvalue is greater than 1, the given component should be assumed in the factor solution (Table 3). Therefore, based on the obtained eigenvalues presented in Table 3, it follows that 6 factors should be taken for interpretation, which almost in 66% accounted for the variability of the common variance.

Table 3. *Eigenvalues and percentage explanation of the total variance*

Component	Initial eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of variance	cumulative %	Total	% of variance	cumulative %
1	9.417	34.877	34.877	5.883	21.791	21.791
2	2.737	10.138	45.014	4.870	18.037	39.828
3	1.799	6.662	51.677	2.100	7.776	47.604
4	1.388	5.141	56.818	2.060	7.631	55.235
5	1.143	4.233	61.050	1.322	4.898	60.133
6	1.046	3.875	64.925	1.294	4.793	64.925

Source: Own research.

Using the already mentioned exploratory factor analysis method with the Varimax rotation, factor loadings were calculated. Finally, to interpret common factors, the variables that were most correlated with the individual factors were selected (in this case, values above 0.7 were adopted). As the analysis shows, the most important information for housewives that affect the purchase is: information on the nutritional value of the product, such as fat, carbohydrate, protein, salt, energy value and the level (in %) of meeting the daily consumption needs, that is, important, obligatory information about the actual value of the product for the consumer (Table 4). From January 2016, they belong to the information that should be mandatory on the label/packaging. The second distinguished factor were the variables related to the infographic, among which the highest level of correlation was achieved by: the manufacturer's website, QR codes and barcodes. These variables, as mentioned above, constitute the basis for an efficient, uninterrupted flow of products between the individual links of commodity circulation and ensuring product availability to the customer.

Slightly lower than the value of 0.7 factor load was obtained by: certificates, packaging material and a quality guarantee. Generally, it can be stated that they complete the scope of information for the consumer about the product and its accessories (packaging) and are important in the customer service process at the last stage of the sales process (point of sale). The third factor in terms of importance (explanation) is the factor related to the storage of the product, in which the storage conditions were the most important. On the other hand, the fourth explanatory factor were the following variables: product name, producer/marketer and brand, i.e. information related to the identification of the product and its market position.

Therefore, it can be assumed that the key determinants of the informational value of food unit packaging, in the opinion of housewives, determining the purchasing process of consumers are as follows:

- factor 1 - information on the nutritional value of the product (fats, carbohydrates, protein, salt, energy value and the level in % of the daily intake needs);
- factor 2 - product quality and marketing characteristics (manufacturer's website, QR codes, bar codes, certificates, packaging material and quality guarantee);
- factor 3 - product storage conditions (storage conditions, product shelf life);
- factor 4 - identification of the product and its market position (product name, producer/marketer and brand).

Table 4. The most important information on food packaging (value of factor loadings obtained by exploratory factor analysis)

Information on packages/labels	Components/values of factor loadings					
	1	2	3	4	5	6
1.name of the product				.707		
2.product ingredients						
3.producer/marketer				.707		
4.brand				.775		
5.date of minimum durability/use-by date			.686			
6.storage conditions			.774			
7.net content/number of items					.565	
8.the product's nutritional value	.763					
8.1.fat content	.854					
8.2.carbohydrate content	.894					
8.3.protein content	.891					
8.4.salt content	.856					
8.5.energy value	.830					
8.6 How many of the daily requirements (%) are met	.716					
9.daily intake	.536					
10.price						.833
11.storage conditions			.548			
12.health/nutritional claims						
13.information about the product		.560				
14.infographics		.646				
14.1.certificates		.674				
14.2.packaging material		.673				
14.3.quality assurance		.656				
14.4.manufacturer's website		.735				

14.5.QR codes		.762				
14.6.barcodes		.705				
15.graphic design		.588				

Source: Own research.

The last factor distinguished that should be considered significant was the price, which is very rarely an integral part of the label/packaging, but undoubtedly is one of the main reasons for making decisions about the purchase of food products by consumers. To sum up - the obtained results as a comprehensive collection are undoubtedly convergent and clearly show which of the information placed on the packaging is important for housewives in Poland in the purchasing process. Therefore, it can be concluded that the information that is of key importance to consumers belongs to the obligatory category, and the survey results confirm the legitimacy of placing it on the packaging of food products. The components of the informational value of food packaging, through their communication, enable the identification of the product, indicate how and for how long the product can be stored and make the consumer aware of the nutritional value of the product and the content of individual nutrients. In addition to the obligatory information, optional information is also important on food packaging, the key to the information value of which was messages about the quality and marketing characteristics of products and the suggested retail price.

6. Conclusions and Recommendations

The results of the research carried out on the identification of key information contained on the packaging, which influence the decisions of purchasing food products by housewives in Poland, allowed for the formulation of interesting conclusions, both substantive and pragmatic. The analysis of the results of the study (carried out using the total mean value method, the index of relative importance, the Garrett method, and exploratory factor analysis) confirmed the assumption that consumers in the process of purchasing food products perceive and analyze only selected information contained on unit packaging. Importantly, it is mainly obligatory information, which confirms the legitimacy of labeling food packages/labels with the above. As it turns out, the most important information on packaging/labels analyzed in the process of purchasing food by housewives in Poland is:

- information about the product, brand, and manufacturer,
- nutritional value of the product,
- product storage conditions at the place of consumption,
- specific marketing and quality characteristics of the product.

In the context of the above, the key information identified in the course of the study must be legible, reliable and understandable (which mainly refers to the marketing and quality characteristics of the food product) placed on the packaging. The optimal solution would be to place (if possible) key consumer information on the front of the

package/label, as research indicates that consumers spend only a few seconds searching for the product they prefer (Hoyer, 1984; Clement *et al.*, 2013) and make their final decision primarily on the basis of the elements (information, graphics) of the packaging. Also, it should be noted that it is unjustified to place an excessive amount of optional information on food packaging because it is not perceived and analyzed in the process of purchasing by consumers, and the overload of information introduces information noise.

The results and conclusions of the study presented in the article are valuable recommendations for entities responsible for placing food on the market (including food packaging designers) in terms of labeling guidelines for unit packaging. A particularly important recommendation relates to limiting the amount of optional information and focusing on the legibility of the message of mandatory information (mainly identifying the product/brand and producer and determining the nutritional value of food). In addition, the identified determinants of the informational value of food packaging (important in the purchasing process carried out by housewives in Poland) are highly utilitarian and may constitute a valuable hint in the selection of communication elements for non-food products just like cosmetics, household chemicals, dietary supplements, OTC drugs, alcohols.

The conducted research and the conclusions drawn from it have limitations related to the adopted research procedure and the research method and technique used. It is worth emphasizing that the respondents' answers, and thus the research results, are only declarative. The respondents' declarations regarding packaging (including the analyzed information) are not always identical to the actual behavior at points of sale. Therefore, it would be interesting to continue research, including the implementation of experiments on the packaging of consumer products (not only food), which would allow the comparison of consumers' declarations with their actual purchasing behavior, and would also be the basis for constructing a model of the informational value of consumer product packaging.

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