



## CONSUMER ENGAGEMENT AND THE PERCEPTION OF PACKAGING INFORMATION

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### Abstract

Packaging is an important factor influencing purchasing decisions, especially in the case of food products. Packaging draws the consumer's attention and communicates with the consumer at a critical time in the purchasing process, providing information, while instructing and educating. The significance of the information varies depending on the product and on the information needs of the consumer stemming from his or her attitude. The level of consumer engagement in the purchase can significantly determine the perception of information – both emotional and factual - on the packaging.

The aim of the article was to research the perception of the emotional content and factual information on the packaging of fruit juice, taking into account the level of consumer engagement in the purchase. It was assumed that high consumer engagement would result in greater visual attention to the product information. The tools used to achieve the goal included eye-tracking and a questionnaire.

The results have indicated that the level of consumer engagement in the purchase of fruit juice (purchase frequency and motivation) does not affect preferences regarding the type of the perceived information.

**ZAANGAŻOWANIE KONSUMENTA A PERCEPCJA INFORMACJI NA OPAKOWANIU**

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**Słowa kluczowe:** konsument, proces podejmowania decyzji, zaangażowanie, opakowanie, informacje, rynek soków.

**Abstrakt**

Opakowanie produktu to ważny czynnik wpływający na decyzje zakupowe, zwłaszcza w odniesieniu do produktów żywnościowych. Opakowanie zwraca uwagę, za jego pomocą producent komunikuje się z konsumentem w momencie procesu zakupowego, przekazuje informacje, instruuje i edukuje. Znaczenie tych informacji jest różne, w zależności od produktu i potrzeb informacyjnych konsumenta wynikających z jego postawy. Poziom zaangażowania konsumenta w zakup może istotnie determinować postrzeganie informacji – emocjonalnych i rzeczowych – na opakowaniu.

Celem artykułu było zbadanie percepcji treści emocjonalnych i informacji rzeczowych na opakowaniu soku owocowego, z uwzględnieniem poziomu zaangażowania konsumenta w zakup. Zakładano, że wysokie zaangażowanie konsumenta będzie skutkowało większą uwagą wzrokową na informacjach rzeczowych o produkcie. Do realizacji celu zastosowano okulografię i kwestionariusz ankietowy.

Wyniki wskazały, że poziom zaangażowania konsumenta w zakup soku owocowego (częstotliwość i motywacja do zakupu) nie wpływa na preferencje w zakresie rodzaju percepowanej informacji.

**Introduction**

The end of the 20<sup>th</sup> and the beginning of the 21<sup>st</sup> century have brought an entirely new perspective on the model of decisions made by consumers. Earlier theories assuming the rationality of consumer choices (Mruk & Jankowiak-Kaczmarek, 2017, p. 81-98) are now being questioned by researchers. The conducted behavioural economic and linguistic studies and their results indicate increasingly often that many decisions made by consumers are of an emotional nature and that emotions, rather than rational arguments, influence consumer behaviour to a higher extent (Kahnemann, 2012, p. 481-497; Damasio, 2002, p. 153-229; Ariely, 2009, p. 278). Emotions are intertwined with rational thinking processes and both determine the ultimate consumer choices, however, emotions (phylogenetically older structures) are most often responsible for the stimulus to make a final purchasing decision (Zaltman, 2003, p. 35-37). In the decision-making model, emotions occur first and have a direct impact on the final decisions of buyers at the shelf (Ohme, 2017, p. 125-140). Enquired after the purchase

about the reasons for their purchasing decisions, they start looking for rational explanations (Mruk & Jankowiak-Kaczmarek, 2017, p. 86).

According to behavioural economics, consumer behaviours are driven by various stimuli, some of which evoke emotions (Ohme, 2017, p. 127) and trigger the buyer's decision-making process (Heath, 2014, p. 175-189). During the process when the choice of a particular product is being made, the consumer is exposed both to sensory and non-sensory factors. Research results demonstrate that in the process of making purchase decisions the significance of sensory factors is higher, especially in the case of visual stimuli (Ares *et al.*, 2010, p. 417-426).

## Significance of the product packaging

The packaging constitutes an important marketing communication instrument which carries appropriate information about the product, affects consumer perception and assessment of the product and influences the consumer preference and choice. The decision regarding buying a food product results from consumer expectations concerning quality which are shaped mainly by the packaging of the product and the information presented on it. The intention of buying a certain food product – such as an organic or a functional food – is mostly driven by consumer opinions and motives related to health (Mondelaers *et al.*, 2009; Grzybowska, 2012). Consumer views regarding the influence that food products have on health usually translate into the frequency of purchase, however the studies conducted by Verhoef (2005) show that in the case of organic meat the perceived quality positively influences the purchase intention, while purchase frequency is not affected by quality perception. Moreover, the nature of decisions may be intuitive or rational (Saher *et al.*, 2006), that is accompanied by a different way of processing information, where rational thinking is defined as unemotional, based on facts and rational information, whereas intuitive thinking is based mainly on the use of emotional sources of information, such as images, experiences and emotions. It may be concluded that there is a diverse consumer sensitivity towards the type and quality of information (emotional and rational) presented in the packaging, resulting from attitude and engagement in the decision-making process.

The packaging of a product is one of the stimuli influencing purchasing decisions (Jerzyk, 2016, p. 707-716). In the course of the decision-making process, the consumer compares many products based on their packaging, evaluating their quality and usefulness, or may rely on earlier learned behaviours and make habitual decisions. Consumers have developed a habit when they regularly exhibit the same behaviour in response to the same stimulus. The packaging and the label usually represent the first contact the consumer has with the product, on the basis of which the attributes of the products are determined

(Ankiel-Homa, 2012, p. 21-30). The conscious evaluation of products can, however, be skipped over since a great part of consumer decisions are automated – customers keep buying the same products in the same stores year after year (East *et al.*, 2014, p. 27).

The packaging includes graphical and informational elements. The graphic images play a key role in attracting the consumers' attention as they have a natural ability to evoke associations and emotions in consumers and make the product packaging stand out against the packaging of other products (Pradeep, 2011, p. 159-173). Buyers, in particular the ones from Generation Z, clearly prefer communication via images rather than by text (Weinschenk, 2013).

The impact of different packaging elements on purchasing decisions is not consistent. In the case of impulse and habitual purchases when the consumer does not engage in the purchase, the influence of structural and graphic elements of the packaging is stronger (Liao *et al.*, 2015, p. 48-55). On the other hand, consumers who are engaged in the purchase decision making process pay more attention to informational elements. An unengaged buyer who makes impulse-driven and habitual decisions based on graphic elements does not acquire knowledge about the product and may reach for the same product when shopping next time. An engaged consumer who analyses the packaging information acquires knowledge about the product and its attributes and develops a conscious attitude to the product which can determine his or her future choices (Pawlak-Lemańska & Mruk-Tomeczak, 2018, p. 345-353).

## **The role of other factors in making purchase decisions**

It should be noted, however, that there are also other factors influencing the decision to choose a specific product. Due to our pace of life and the need to make many decisions each day, the process is to a high extent automated and can be determined both by habits and by other subconscious factors (Zaltman, 2003, p. 34-36). In the case of habitual (routine) purchase decisions, also by people who are loyal to a certain product (brand), consumers are less engaged in the purchase and do not feel a need to analyse the information on the product packaging each time. The packaging becomes only the product's identifier and thanks to the graphic elements it is easier to find the product among many others on the store shelves (Ankiel-Homa, 2012, p. 40-45).

A positive attitude to the product and, in effect, the buyer's decision to choose it, can be induced by its repeated presentation (Zajonc, 1985, p. 27-72, Ohme, 2017, p. 248) and a properly designed product communication can influence the way in which consumers will remember the product (Zaltman, 2003, p. 99). The latest research shows that the consumer's contact with the product at the shelf is most often the last and not the first contact as it used to be in the past

(Scott, 2015, p. 40, 41). With the Internet, social media and unrestricted access to information, consumers can acquire exhaustive information about the product before its purchase, without spending any time on analysing it at the shelf. The significance of prior experience should also be appreciated since positive experience with a certain product in the past influences the consumer's decision to buy it again (Zaltman, 2003, p. 229). Another factor of importance in the process of choosing a particular product is merchandising, that is the way in which products are presented, displayed and arranged on the store shelves (Mruk & Jankowiak-Kaczmarek, 2017, p. 92-94), as well as sensory marketing activities.

The conclusion which can be drawn from all these considerations is that, on the one hand, the degree of consumer's engagement in the product purchase influences the perception of selected elements of the product packaging which can encourage the choice of a specific product; however, there are also other factors likely to determine the ultimate purchase decision.

## Consumption of fruit juices in Poland

In the structure of non-alcoholic beverages in Poland in 2016, the second place (right after carbonated soft drinks) belonged to the category of fruit juices, nectars and drinks which had a market share of 31%. Since 2010, a rapid growth in the sales of this category of products has been observed. In 2016, the total sales value was PLN 7,703 m, up from PLN 7,207 m in 2015 and PLN 6,647 m in 2014. The research results show that the increase should mainly be attributed the consumers' growing interest in the subcategory 100% juices, which accounted for 53% of the total category sales in 2016 (Skalska-Józefowicz, 2017, p. 10), compared to 46% in 2015 (*Rynek napojów bezalkoholowych w Polsce*, 2016, p. 39).

The Polish juice market is considered to be mature. The range of products from this category appearing on store shelves is getting bigger all the time. Polish consumers are interested particularly in fresh juices (pasteurised and unpasteurised) and naturally unclarified juices (Balon & Dziadkowiec, 2016, p. 57). The consumption of fruit juices (and fruit and vegetable purees) in Poland is on the rise. In recent years the annual increase in per capita consumption of fruit juices amounted to 1 litre. Fruit juice consumption in 2016 showed a nearly 8% growth year-on-year and each Pole drank on average 14 litres of juice (compared to 11.4 litres per person in 2013) (*Konsumpcja soków wzrosła w Polsce o 8 procent*, 2017). The data show that Poland currently ranks slightly above the European average in terms of fruit juice consumption, but in Western European countries the consumption is still higher (Germans drink nearly 20 litres of fruit juice per person every year).

According to studies, one in four Poles (23.9%) drinks juice a few times a day, one in three (33.3%) every day and 25.9% of Poles reach for fruit juice a few times a week. Women and children are most eager to drink fruit juice as a snack between meals (73.1%) or when they are away from home (56.6%) (*Konsumpcja soków wzrosła w Polsce o 8 procent*, 2017). The most popular flavour of fruit juice and nectars is orange (25.4% of the total volume purchased), followed by carrot (22.7%) and apple juice (15.4%) (Balon & Dziadkowiec, 2016, p. 57).

The prospects for the fruit juice market in Poland are good. It is predicted that Poles will be drinking more and more juice, especially from the NFC (not from concentrate) category which means freshly squeezed or pressed (*Rynek napojów bezalkoholowych w Polsce 2016*, p. 41). The development of the market also fits well into the overall well-being and healthy food trend.

## Research problem

In the foregoing considerations arising from the model of making purchase decisions, which take into account the stimuli affecting such decisions, in particular the product packaging, a view is presented that the degree of consumer's engagement in the purchase can determine the perception of particular elements of the packaging. A study was carried out to verify this view and check which elements of the packaging (informational or emotional) attract the attention of the consumer engaged in the purchase more effectively. So, the aim of this paper was to examine the impact of the packaging elements (informational or emotional elements) on the purchase decision, taking into account the level of consumer engagement in the purchase. The object of the study was a range of different orange juice packaging of two types (carton and plastic). Fruit juice generally belongs to the category of food products purchased habitually. Nevertheless, due to consumers' growing interest in having a good diet and healthy lifestyle, they may also make conscious and rational choices when buying juice. It has thus been assumed that the model of a habitual purchase in the case of consumers engaged in the purchase may be moderated by a need to find rational information.

The use of emotional elements, such as the fruit image on the juice packaging, is unquestionably omnipresent. It is assumed that unengaged consumers do not read verbal information (such as the flavour : "orange"). They only look at non-verbal elements (such as, pictures of the fruit denoting the juice flavour – image of an orange). In the literature, there is a consensus that 90% of consumers decide to buy a product on the basis of the appearance of the packaging front – without holding the product in their hands (Clement, 2007, p. 917-928).

The speculations concerning the existence of correlations between the degree of consumers' engagement and the perception of the structural packaging elements lead to the formulation of the following research hypotheses:

H1: There is a correlation between consumers' perception of the impact of drinking fruit juice on their health and the frequency of buying the product.

H2: There is a correlation between the consumers' degree of engagement in the purchase of fruit juice and the packaging elements to which they pay attention.

H3: Informational elements on the packaging attract more effectively the attention of consumers engaged in the fruit juice purchase compared to unengaged consumers.

## **Research method**

For the purpose of verification of the aforementioned research hypotheses a questionnaire and eye-tracking technology was used.

By way of determining the position of the respondents' eye pupils, eye-tracking allows for the tracking of their eyeball movements and, as a result, for the identification of the direction in which they look and their eye fixation. Eye pupils of the study participants were exposed to infrared light which is reflected. The observation of the reflected infrared light enables the identification of the object which currently attracts the respondent's attention (Wąsikowska, 2015, p. 177-192). Through eye-tracking measurements, it is possible to track the entire movement of the respondents' eyes and to identify the elements of the packaging which attract their visual attention longer.

In order to verify the adopted hypotheses, experimental research was carried out in the Consumer Research Centre of the Poznań University of Economics and Business. Two different orange juice packaging items were used in the experiment, in which specific areas of consumers' interest were defined: informational elements (information about the product ingredients and number of calories) and emotional elements (fruit images, slogans such as "Source of Vitamins" or "Love Health, Love Life", the producer's logo). The pictures of the food products were presented on a computer screen for 7 seconds and, subsequently, the study participant was requested to answer the questions in the survey questionnaire.

The respondents answered questions concerning their engagement in the consumption of fruit juices by providing information about the frequency of purchasing the products and their attitudes regarding the impact of drinking fruit juice on health. Using the five-point Likert scale (from 1 – Strongly Agree to 5 – Strongly Disagree), they expressed their opinions on the positive/ negative impact of juice consumption on their body. The respondents were also asked to name their preferred product flavours, reasons for the consumption of products and the circumstances under which their consumption increases. The five-point Likert scale (1 – Strongly Disagree, 5 – Strongly Agree) was also applied to the identification of the packaging elements to which the respondents pay attention while making the purchase, taking into account such structural components as the product brand, its composition and nutritional value, definition

of the product type, graphic elements, the use-by date, name of the producer, the packaging volume and the content of vitamins. The respondents were also asked to evaluate the presented packaging in terms of clarity, completeness and visual attractiveness (Tab. 1).

Table 1

Results of declarative studies (questionnaire)

Packaging information		Average	Standard deviation		Average	Standard deviation
Ingredients and nutritional value	engaged consumer	3.87	1.106	unengaged consumer	0.12	0.928
Brand name		3.70	0.952		0.65	0.702
Definition of the product type		2.30	1.055		0.59	1.064
Graphic elements		2.30	1.055		0.53	1.068
Use-by date		3.63	1.129		0.82	1.185
Producer		4.13	1.042		0.41	1.326
Volume		2.27	1.202		0.47	0.874
Fair Trade mark		4.07	1.258		0.76	1.300
Information about the website		3.47	0.973		0.18	1.131
Vitamin content		3.80	1.064		0.59	1.326
Environmental marking		1.93	1.015		0.53	1.281

Source: authors study.

Forty-seven persons took part in the experimental research. A sample of more than 30 persons, based on the experience of researchers using the eye-tracking technology, is considered as sufficient to meet the scientific requirements of representativeness (Kaczmarek, 2016, p. 96). The group consisted of 8 men and 39 women. The participants were rather young, with the average age being 23. The youngest participant was 19 years old and the oldest one was 31. All respondents confirmed having no visual impairments which could be an obstacle to the performance of eye-tracking studies.

## Research results

The respondents said they most often drank orange juice (36 persons), apple juice (19 persons) and multi-fruit blends (11 persons). Grapefruit juice and blackcurrant juice was selected only by 7 consumers. With regard to declared reasons for consumption, most respondents said they drank juice because they liked its taste (33 persons). Twenty-six persons surveyed said they bought fruit juice when they meet with friends and 22 choose fruit juice because of the

content of vitamins. The lowest number of consumers believed that fruit juice boosts energy. Only five respondents admitted to buying juice out of habit. The most frequently mentioned motivations for buying larger quantities of juice included confidence in the positive impact on the consumer's health, a high content of vitamins and the effect on maintaining ideal body weight. A few respondents (6 persons) mentioned the price of the products as a factor influencing their increased consumption of juice, saying that a reduction of the price would result in a more frequent consumption of the beverages. The sweet taste of juice (achieved without an additional content of sugar), family growth and local producers are the factors with the least influence on the increase in juice consumption by the respondents.

Based on the attitudes towards the impact of juice drinking on health, the consumers were divided into three groups: persons who believe that drinking juice is good for their health, respondents who do not have an opinion about the impact of juice consumption on health and the persons who are certain that fruit juice consumption is unhealthy. In order to test H1 regarding the existence of a correlation between the positive impact of juice consumption on the respondents' health and the frequency of juice purchases, the undecided persons were excluded from the analysis. Statistical chi-square tests were performed which showed that hypothesis zero assuming no correlation between the variables (the impact of drinking fruit juice on health and the frequency of buying fruit juice) must be rejected. Thanks to the conducted tests, it has been proven that the persons who believed that drinking juice was healthy bought the products more often. In other words, the study showed that they were engaged in the purchase of fruit juices which means that H1 should be accepted ( $p < 0.05$ ).

The acceptance of H1 determined the comparison of answers to questions concerning the circumstances triggering higher juice consumption and the reasons for buying juice, broken down into engaged vs. unengaged consumers. Asked about the circumstances under which juice consumption rises, 19 engaged consumers said they would drink more juice if they could be certain of its positive impact on health. Only 10 unengaged respondents agreed with that statement. Twice as many engaged consumers (28 persons) emphasised the significance of a higher content of vitamins and mineral nutrients as a reason for increased consumption. The biggest difference between the two groups was recorded in the case of the answer "if it helped maintain ideal body weight". Thirty-three engaged consumers and 12 unengaged consumers agreed with the statement. In the case of other statements concerning consumer ethnocentrism (local producers), product prices, sweet taste and the respondent's family getting bigger, the differences between the answers given are insignificant (1 to 2 persons per statement).

With respect to factors determining the purchase of products, five engaged consumers said they were buying fruit juice out of habit while no unengaged consumer opted for habitual purchases. The biggest differences were noted in the case of the statement "I like its taste" – 17 persons (25 engaged consumers,

8 unengaged consumers) and “contains vitamins” – 12 persons (17 engaged consumers, 5 unengaged consumers). In the case of other questions, differences in the answers given were minor.

In the chi-square statistical test performed in order to verify the H2 hypothesis, the variable, which divides respondents into two groups, was the consumer’s engagement (measured in terms of frequency of purchases and the declaration that fruit juice has a positive impact on health) and the next variables were the answers given to questions about the information checked in the product packaging (e.g. brand name, producer, graphic elements) (Tab. 1). It turned out that the degree of consumer’s engagement in the purchase of food products was not correlated with the packaging elements to which consumers paid attention (as declared). H2 must then be rejected ( $p > 0.05$ ) which means that the declared significance of packaging information is similar both for consumers who buy a product with high or low purchase frequency and also for consumers who believe that drinking fruit juice is good for health; as well as the ones who do not share that opinion.

In order to identify the areas of the presented packaging which attract the respondents’ attention most effectively, eye tracking data were analysed, including the recorded entry time (the time when the element was noticed for the first time), the total time of gazing at specific structural elements of the packaging, number of times specific elements were revisited and the number of and average duration of individual gazes (fixations) (Tab. 2).

Table 2

## Results of eye tracking studies

Area of interest	Eye tracking indicators	Consumer engagement			
		engaged		unengaged	
		average	standard deviation	average	standard deviations
Information (information about the product ingredients and number of calories)	entry time [ms]	4,150.18	1,288.53	4,177.50	1,772.75
	total gaze time [ms]	1,966.02	5,330.69	1,951.05	6,522.97
	number of revisits	1.65	1.74	1.64	1.93
	number of fixations	6.64	13.67	6.59	17.99
	average fixation duration [ms]	175.94	114.22	175.80	122.59
Emotional elements (fruit images, slogans such as “Source of Vitamins” or “Love Health, Love Life”, the producer’s logo)	entry time [ms]	4,081.64	2,545.02	4,081.64	6,725.01
	total gaze time [ms]	1,836.23	2,443.14	1,832.70	1,211.10
	number of revisits	1.65	2.49	1.64	1.71
	number of fixations	6.31	7.40	6.29	3.46
	average fixation duration [ms]	178.19	109.74	178.09	145.76

Source: authors study.

The results of eye tracking studies showed that out of all analysed elements of fruit juice packaging, the respondents paid the same amount of attention to emotional and informational elements. The results of eye tracking tests did not change with the growing degree of consumer's engagement in the purchase. No matter whether the packaging was viewed by an engaged or unengaged consumer, both emotional and informational elements attracted respondents' sight. All parameters, such as the total gaze time, the entry time, the number of revisits and fixations were similar for both areas. Consumers paid attention both to fruit images and slogans, such as "Source of Vitamins" or "Love Health, Love Life" and to the information about the product ingredients and the number of calories. The results of eye-tracking measurements have proven that the H3 hypothesis must be rejected which means that the perception of packaging information is of an automatic nature and even engaged consumers do not need a conscious opinion to make a decision which juice to choose.

## **Conclusions**

The packaging helps to identify the product, provides information about its quality, value and freshness and it's the most important source of information for the consumer at the time of purchase. From the point of view of effective marketing communication, it is important to identify the packaging elements which are evaluated in the course of the decision-making process. It was assumed that the consumer's attitude would have an influence on the types of information preferred and perceived by the consumer. The research showed, however, that despite the declared consumer attitudes regarding their engagement in the purchase, fruit juice is a typical product purchased habitually and automatically. The reactions of an engaged and unengaged consumer to the packaging and the information presented on the packaging are the same. Similar consumer behaviour proves that earlier experience and the habits acquired in the past make quick purchase decisions possible. Introduction of small changes to the artwork of fruit juice packaging will not change the purchasing behaviour and preferences of consumers. A chance to modify purchasing behaviour might be related to the market positioning of the juice brand, higher frequency of advertisements or creating a new product category

Such a category should be based on selected attributes of the product which are considered important from the consumer's point of view, such as health. It seems possible to change consumer preference by introducing new, original packaging labels that would draw visual attention and engage emotions.

Our study has limitations which lead to formulating the prerequisites of further studies. First of all, only two cardboard orange juice boxes were used in the study, which made the study very simple and atypical, since usually consumers choose from a significantly wider product range. Therefore, future

studies should cover more products as well as other forms of packaging – plastic and glass packaging. Secondly, we analysed emotional and rational information collectively, without dividing them into individual components. Finally, in our studies we have assumed that engaged consumers are convinced of the beneficial effects of drinking juice to their health and that they buy juice more frequently. In future studies it would be useful to indicate other variables, such as e.g. the consumer's attitude towards ecology or information processing style (intuitive, analytic) that may determine the perception of emotional and rational information shown on the packaging. The maturity of the juice market in Poland and the threat of lower sales will trigger the development of various juice categories (especially the NFC category). Their positioning in the minds of consumers will be shaped by advertisements and packaging. It is predicted that the launch of new packaging forms, new pictograms and new information by producers will make their products stand out and be perceived as a market novelty. The desirable attributes of such behaviours will include information about the beneficial impact of the product on health, a higher content of vitamins and mineral nutrients and reduced calorific value. A producer who will position its products through such properties will have high chances for success.

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