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ANALYSIS OF THE MODEL OF CONSUMER BEHAVIOR IN THE HEALTHY PRODUCTS SEGMENT AS A PERSPECTIVE FOR THE INCLUSIVE MARKETING DEVELOPMENT

Abstract. The article is devoted to considering an issue in the Ukrainian market regarding healthy behavior, particularly in the field of consumption and research of trends in the development of the segment of healthy products. The article's main purpose is to determine the predominant behavioral patterns of the population of Ukraine regarding the consumption of healthy foods. The study found a degree of consumer interest in healthy foods. The relationship between the level of happiness of the population and its activity to the consumption of products of the healthy food segment is modeled. The authors have identified the factors influencing the choice of products in the analyzed segment. The degree of consumer awareness of typical labels on products of a healthy segment is determined. According to the study results, recommendations are given on the expediency of using different information channels of interaction with consumers in the healthy food products market for forming inclusive marketing strategies. The methodological basis was a marketing study of Ukrainian citizens. Methods included online surveys in the form of questionnaires and offline surveys by respondents filling out printed questionnaires. The questions of the questionnaire were divided into blocks, which provided an opportunity to find out the respondents' attitudes towards the following groups of questions: a) interest in products of the healthy segment and general behavioral patterns when choosing products in this category; b) consumer awareness of the main types of labeling on the packaging of healthy segment products; c) consumer awareness of existing healthy food products on the market and the peculiarities of the purchase of these goods by an individual; d) the degree of trust in marketing channels of informing about healthy food products among the population of Ukraine. The results of the study may be useful to manufacturers in the segments of healthy foods. The material presented in the article will be of interest to representatives of related fields of activity and specialists involved in developing and implementing promotion strategies in the segment of health products.

Keywords: health product consumption, food market, behavioral patterns, marketing channels, product labeling, marketing research, inclusive growth.

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Introduction. Every market is very dependent on the consumer, who ultimately determines which product the company will produce. The same situation is typical for the healthy product market in Ukraine. Before distributing the product on the market, it is necessary to determine whether it is relevant to the target market, what needs it will meet, whether there are substitutes for this product and whether the technology of production of this product is modern in standards and approaches cost, etc. Consumption of healthy products largely depends on the general socio-economic situation in the country and the region in particular. The consumption of healthy products (organic vegetables and fruits, products without harmful impurities and sugar) increases with the growth of real incomes. The analysis of the average daily consumption structure of main micro and macro elements in food for Ukrainians revealed a tendency to reduce the overall caloric content of food but to increase valuable components such as retinol (5% in 2019 compared to 2000), beta-carotene (an increase of almost 85% in 2019 compared to 2000), protein (7% in 2019 compared to 2000) (Balances, 2020). The results of a global consumer survey conducted by PwC in March 2021 indicate that consumer demand for healthy products tends to increase. Half of the respondents include more plant foods to make their diet more environmentally friendly (PwC, 2021). According to a study (RAU, 2018) regarding the Ukrainian market, the population points out health care as one of the three most important issues for themselves. There is a noticeable increase in interest in healthy foods, especially in the category of baby food. Specialized departments with eco-products actively emerge in the retail sector. Ukrainian consumers are willing to buy and pay even higher prices for products that do not contain artificial flavors, dyes, GMOs, hormones, does not contain sugar (or its content is minimized), and so on.

The future of the food market will be characterized by increasing personalization (individually designed buying process according to the state of health and accepted diet of individuals and their family members). New business models will actively appear in the food industry. Currently, there is a revision of strategies for interaction with consumers, emphasizing dialogue in the digital environment. Another trend is to be inclusive - to create a sense of community (psychological, geographical, etc.). Consumers who consider themselves involved in a particular group better remember and choose companies with inclusive marketing strategies. With the healthy products market saturation, consumer expectations are growing, making it difficult for manufacturers to stand out among competitors. To be competitive, they invest in product development and bring innovations to the market, using a variety of marketing communications. One of the effective ways to convey information about the benefits of a health segment product is to use the labels of safety, usefulness, and naturalness on its packaging. According to Nielsen surveys, 41% of consumers in the world trust the labels «eco», «bio», «natural» on the packaging. The crisis caused by the COVID-19 pandemic has accelerated the growth of healthier, cleaner, and more local products. According to (Myronova, 2021) about a third of the population of Europe plans to pay more attention to healthy eating in 2021, and 24% – to spend more on local products. At the same time, 19% of respondents are willing to spend more on environmentally friendly products. The pandemic also changed the consumer habits of 63% of Ukrainians (Deloitte, 2021). At the same time, according to the UN, three billion people worldwide cannot afford a healthy diet. Two billion people are overweight or obese, and 462 million people are underweight. Therefore, ensuring a healthy diet in the world and Ukraine is essential at the international and national levels. An important factor is the personal interest of the vast majority of consumers in caring for themselves and their families, willingness to make a balanced purchase of goods in the segment of healthy eating, and information work in maintaining the population's health. According to the World Health Organization, the physiological state of a person is 70% dependent on nutrition.

The purpose of the study is to identify the predominant behavioral patterns of the population of Ukraine regarding the consumption of healthy foods. The objectives of the study are as follows: determining the general interest of consumers in the products of this segment; deciding on their socio-economic status and, as a result, modeling the relationship between the level of welfare of the population and the activity of consumption of products of the segment of healthy eating; identification of factors that influence the

choice of food among the surveyed population; identifying the degree of consumer awareness of typical labels on products of a healthy segment; finding out the relevant information channels of interaction with consumers. The authors put forward the following hypotheses of the study:

H1: The purchasing capacity of people who feel happy among most of them did not change during the COVID-19 pandemic.

H2: Consumers who feel happy are more active in buying products in the health segment.

H3: The price and taste of the product have a significant impact on the purchase decision in the segment of healthy food products.

H4: For women, trust in the manufacturer is more important when choosing food than for men.

Literature Review. Bibliometric analysis in consumer behavior in the healthy products segment showed a growing interest in this research field. The authors analyzed the most recent publications indexed in the Scopus database. The sample amounted to 1,051 publications. There were four combinations of the search words with operator AND («consumer behavior» AND «healthy products» AND «marketing» AND «strategy»). There were used such options of search in the database as «title, abstract and keywords». The authors visualize the results using the modern program tool VOSviewer. The VOS viewer program identified the main five clusters of scientific researches (Fig. 1).

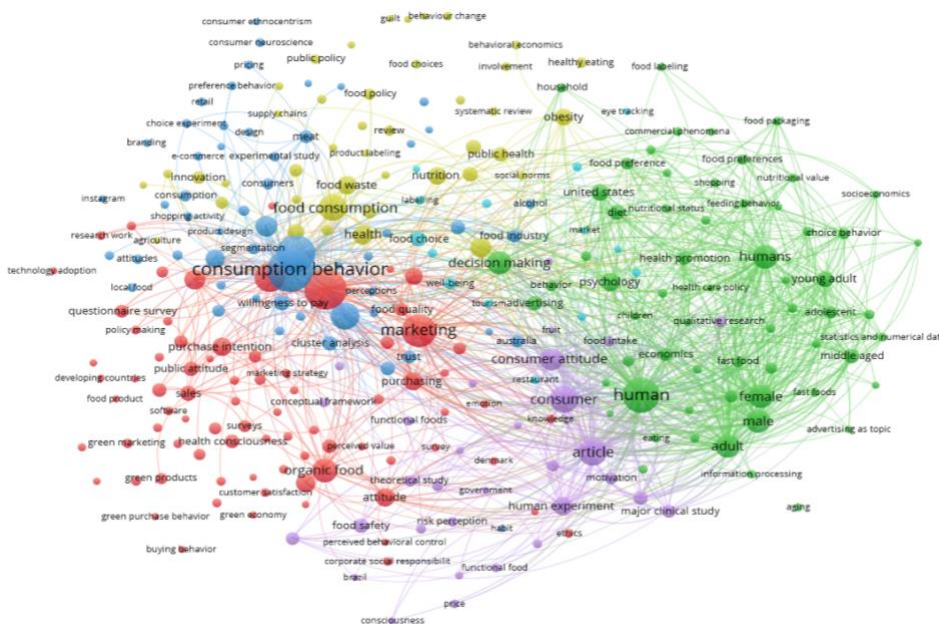


Figure 1. Results of bibliometric analysis in the area of consumer behavior in the healthy products segment

Sources: developed by the authors.

The first (most powerful: total links strength – 15,807, links – 7,699) red cluster was formed around the concept of «consumer behavior». It includes such keywords: «marketing», «sustainability», «organic food», «purchasing», «theory of planned behavior». The cluster is generally formed on behavioral and marketing aspects of the healthy food market and their role in shaping sustainable economic development.

The green cluster includes works focused on the study of different consumer groups, the psychology of their behavior in choosing and purchasing food. This cluster covers keywords such as «decision making», «male», «female», «adult», «psychology» and others, and is formed around the concept «human» (occ. – 108, total link strength – 1,310, links – 205).

The blue cluster is tied to the concept «consumption behavior» (occ.– 164, total link strength – 921, links – 224) and covers keywords «consumer behavior», «retailing», «food market», «food industry», «packaging», «lifestyle». The works grouped in the blue cluster concern the study of the behavior of food market participants in the trade process from producer to consumer.

The yellow cluster is formed around the concept «food consumption» (occ. – 61, total link strength – 308, links – 133) with main keywords «health», «food waste», «nutrition», «food», «sustainable consumption», «covid-19».

At the heart of the purple cluster is the concept «consumer» (occ.– 67, total link strength – 666, links – 178). Publications within this cluster contain the results of various research methods and analysis of consumer behavior. The following main keywords belong to this cluster: «consumer attitude», «human experiment», «structural equation modeling», «interview».

Figure 2 shows the major publishing countries in this research field. Six countries lead in it. They are the USA (263 documents), the United Kingdom (105 documents), Australia (91 documents), Italy (81 documents), India (68 documents), and Germany (60 documents). These countries form the leading clusters together with China (54 documents) and Spain (48 documents).

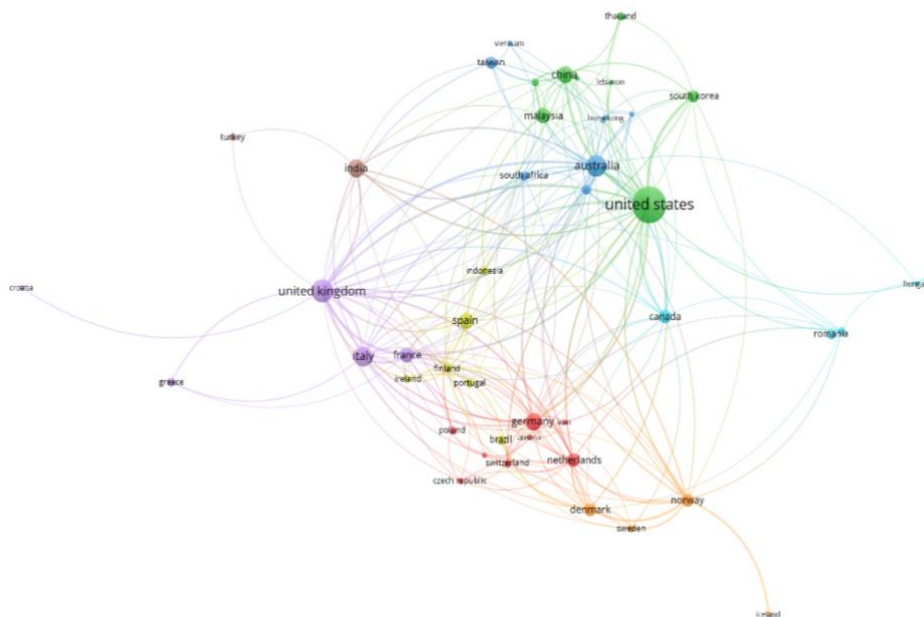


Figure 2. The network of relationships between countries in the research of consumer behavior in the healthy products segment in 2010-2021

Sources: developed by the authors.

The analysis of the agri-food market development in the context of economic globalization (Bilan et al., 2017) allows determining the prospects for its development and forms bases for forecasting consumers' behavior at a choice of foodstuff and following of healthy food tendencies.

Determining the impact of greenwashing on companies' green brands (Pimonenko et al., 2020) brings researchers closer to the formation of consumer behavior models considering health factors.

The paper (Vasylieva et al., 2020) shows arguments and counterarguments within the scientific discussions on financial, socio-economic determinants, as well as the impact of human habitat on personal ability to survive the crisis caused by the effect of COVID-19, which is an important aspect not only of the healthy regional policy formation but also the introduction of inclusive economy elements.

Statistical tools used for determining the impact of the shadow economy on innovative country development (Tiutiunyk et al., 2020), energy efficiency as an element of sustainable economic development (Vakulenko and Myroshnychenko, 2015; Kolosok et al., 2020) allows determining the effectiveness of these elements as drivers of sustainable development (Teletov et al., 2017).

The authors (Bilan et al., 2018; Vysochyna, 2020a) analyzed the impact of environmental determinants on the state of food security as an element of inclusive economic development (Commission for Inclusive Growth, 2017). Analysis of 19 indicators for a sample of 28 post-socialist countries for 2000-2016 shows a statistically significant positive impact of most environmental determinants of sustainable agricultural management on food security.

Research of factors influencing consumer behavior and their analysis, including determining the relationships between consumer motivations (health, environmental, and social consciousness) (Makhnusha and Kosolap, 2011), organic food identity, and organic food behavior (Hansen et al., 2018); analysis of factors that contribute to the transition to the acquisition of organically pure products (Ricci et al., 2018) based on the theory of planned behavior and adding the context in which individuals reside (Laureti and Benedetti, 2018); the importance of regional components of front-of-package nutrition labeling as part of improving nutritional status and prevent chronic nutrition-related diseases among specific at-risk populations (Egnell et al., 2018); consumer behavior toward natural products by utilizing the stimulus-organism-response theory (Kumar et al., 2021); predictors of GM foods consumption intention (Akbari et al., 2019); the main components of food selection are to be defined in the work (Chen and Antonelli, 2020). These components include internal factors (personal feelings), external factors (information, social environment, physical environment), personal factors (biological features and physiological needs of man, his habits), cognitive factors (skills, knowledge, feelings, personal identity), and socio-cultural factors (culture of the environment, income, political characteristics of the country of residence). It allows not only to do more effective segmentation of organic food markets based on consumers' motivations and values but also helps build as a roadmap for facilitating communications and collaborations between stakeholders on the way of achieving sustainable development goals economy (Lyulyov et al., 2019; Bilan et al., 2020; Hens et al., 2019; Samusevych et al., 2021; Tiutiunyk, 2018; Kuzior et al., 2021) and forming the inclusive economy (Carson, 2020; Gupta and Vegelin, 2016; Helne, 2021; Liu et al., 2020).

Methodology and research methods. The methodological basis of the study is analytical and empirical research. The main results are based on a marketing study of Ukrainian citizens on healthy eating. The survey was conducted in the summer of 2021. The survey methods included online surveys in the form of questionnaires using the Google Forms service and offline surveys by filling out questionnaires (including a survey conducted among buyers of a specialized health food store in Sumy city). Questionnaire analysis and report preparation were performed in the software environment IBM SPSS Statistics 20 and MS Excel. The sample consisted of 120 people, of whom 66.7% were women, and 33.3% – men. More than 70% of respondents represent millennials' generations (Y) and buzzers (Z). These generations in many sources of information are specified as the most active supporters of a sustainable lifestyle. Among the respondents, 28% are still studying, 55% are employed persons, 9% are retirees, 8% are housewives/unemployed.

The questions in the questionnaire are divided into groups:

- 1) Related to the interest in healthy segment products and behavioral patterns in food choices.
- 2) Finding out the awareness of consumers about labels on products of a healthy segment.

3) Determining the consumers' awareness about the products of the healthy segment and the peculiarities of their purchase (frequency of purchase, to whom they buy them).

4) Those that determine the expediency of using different sources of promotion products of a healthy segment.

Results. In the food production field, today's healthy market includes the following categories: health, functional, enriched, probiotic, «free-from-food» and organic. Organic products are of primary demand in the Ukrainian market (products grown without chemicals, synthetic fertilizers in crop production, hormones, growth stimulants, and antibiotics in livestock breeding). Other products that Ukrainians actively buy are «free-from-food». They do not contain gluten, sugar and other allergens or undesirable components. They are mainly in demand among specific categories of consumers, such as allergy sufferers or people who follow a diet. Dietary supplements (in other words, biologically active supplements (vitamin and mineral supplements in the form of tablets, powders, sachets, capsules, etc.)) are of interest too. Another category of people, mostly young people under the age of 45, is interested in energy products, particularly in the wake of the growing popularity of fitness centers. According to the results of surveys, most consumers also objectively refer to baby food in the segment of healthy foods, not without reason, as such products are made in compliance with the safety of ingredients and maximum saturation of goods with valuable micro-and macronutrients for children. Ukrainian producers are beginning to draw consumers' attention to functional products («food for specific health use»), which are similar to dietary supplements, but, in contrast, contain a useful ingredient in the food product.

Figure 3 shows the number of respondents who found themselves happy and the answers to questions about changes in purchasing behavior during the COVID-19 pandemic. Among 49 respondents who found themselves happy, the majority did not change their purchasing activity (90%), 8% – answered that they spend more, 2% began to save more.

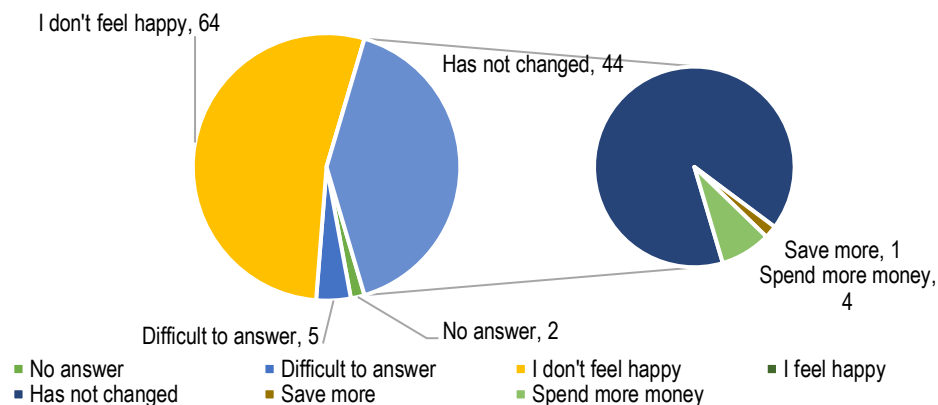


Figure 3. Answers to question about changing consumer behavior during the COVID-10 pandemic among consumers who feel happy, in %

Sources: developed by the authors.

The authors analyzed respondents' answers to a group of questions about the interest in buying products of a healthy segment and their behavioral patterns when choosing such products. This group of questions relates to the interest in healthy food products, caring for the health, product labeling, product ingredients, and the impact of consumer culture on the food choices of every person. The questions were formed on the Likert scale, when the respondent for each of the five statements expressed the degree of agreement or disagreement on a five-point scale (0 – strongly disagree; 5 – completely agree). Consumer

clustering was performed by the k-means method, which made it possible to identify four clusters (Tables 1-2). It is possible to characterize each of the four clusters according to the obtained values.

Table 1. Cluster endpoints in the classification of consumers based on interest in products of a healthy segment and behavioral patterns when making a purchase decision

	Cluster			
	1	2	3	4
Interest	3,1	2,1	4,3	5,4
Care	3,3	3,4	4,2	5,7
Label	4,2	1,8	2,1	5,5
Ingredients	2,7	1,1	3,3	5,9
Culture	4,3	2,1	4,6	4,4

Sources: developed by the authors.

Table 2. The number of observations in each cluster

	1	19
Cluster	2	24
	3	43
	4	34
	Valid	120
Missed values		.000

Sources: developed by the authors.

Cluster 1 – consumers who are weakly interested in products of the healthy segment. Little attention is paid to maintaining one's health. Women with children are mainly in this cluster. If some of these consumers buy products from the healthy segment, it is mainly for children. Mark on the product that it is intended for children is essential for them. For the most part, these respondents said they felt unhappy.

Cluster 2 – the least responsible consumers who are not interested in the segment of healthy foods. They are not interested in the labeling and ingredients of the product. This cluster includes respondents who feel happy and those who feel unhappy in equal proportions.

Cluster 3 – consumers who are moderately interested in healthy food and care for their health. For the most part, these respondents are single and without children, who ignore the product's labeling. In most cases, they get acquainted with the ingredients of the product before buying it. Among them are a significant number of respondents who feel happy.

Cluster 4 – strong supporters of healthy products that take care of their health. Among them, almost 80% of respondents admitted that they feel happy.

According to the results of clustering, the supporters of a healthy lifestyle and consumers who are more interested in the products of the healthy food segment are in the vast majority happy. It is advisable to check how much the approximate volumes of healthy food products consumption change (by groups of goods and by frequency) depending on a particular cluster of consumers. The endpoints on both sides will be cluster 2 (as consumers who are not interested in the products of this segment) and cluster 4 (most interested in healthy products). The modeling was conducted to account for the percentage of consumers in each cluster who feel happy (from the 1st cluster, where they are least, to the 4th, where they are most).

Figure 4 simulates the features of consumer behavior by groups of goods in the segment of healthy food by individual clusters of consumers, which differ in their commitment to the healthy goods and feeling of happiness. The model presents the percentage of respondents, not absolute values, which is explained by the desire for the objectivity of calculations because a slightly different number of respondents entered each of the clusters.

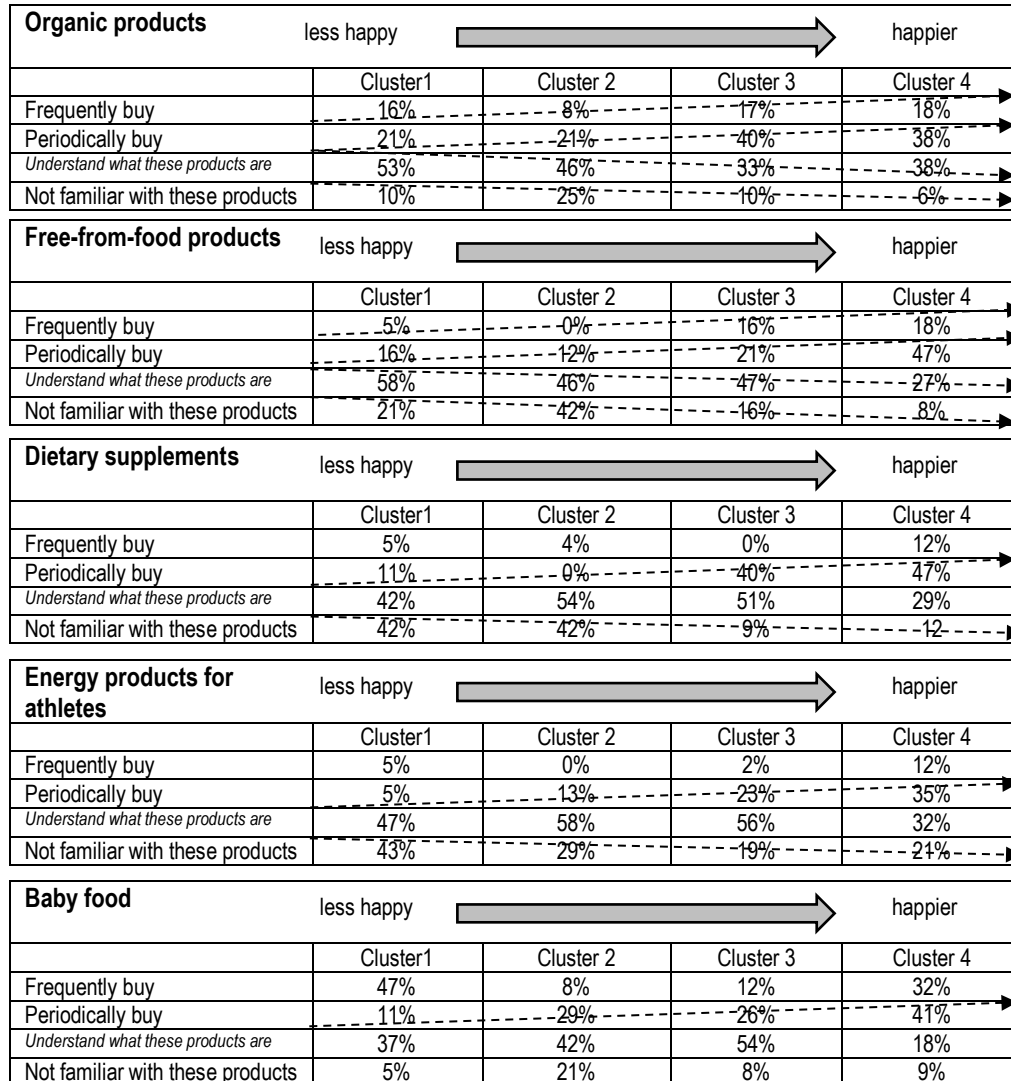


Figure 4. Modeling of consumer behavior in the segment of healthy products, which determines the relationship between the level of happiness and the consumption of healthy goods

Sources: developed by the authors.

In the constructed model, the dotted arrow lines show the identified ascending or descending patterns by clusters and product groups for organic products. Thus, there are clear growth patterns in consumption and purchasing behavior from the first (with the least happy respondents) to the fourth cluster (with the happiest respondents). At the same time, the number of consumers who are unfamiliar with organic products is decreasing. The exception is the release of the result with cluster 2, which is the least interested in healthy foods consumers (25% of respondents in this cluster are not familiar with organic products and their specifics). It is a decline of consumers aware of products, but this is because all those aware included

in the subgroup of those who buy products regularly or periodically. This indicator is in italics and is not indicative. The result is the regularity of purchasing products and the percentage of consumers in each cluster who are unfamiliar with them. For the group of goods «Free-from-food» with the promotion from cluster 1 to cluster 4, there is an increase in the percentage of consumers who frequently or periodically buy them. When analyzing the results of modeling upward and downward trends in consumption and consumer awareness of the group «Dietary supplements», a significant increase in periodical consumption is observed when moving from the first cluster to the fourth. However, the downlink is the arrow line for the category «Not familiar with these products» when moving from the first to the fourth cluster. The small proportion of consumers who regularly consume this category of products may be due to sufficient full awareness of the features of these products, which to benefit from them require not daily but periodical consumption. Thus, the Ukrainian market is characterized by asymmetrical awareness among consumers about dietary supplements. Similar is the consumer behavior in the group «Energy products for athletes». Their consumption is higher among consumers in cluster 4, supporters of a healthy lifestyle, who mainly consume them as part of their specialized fitness and wellness programs. Other consumers consume them periodically, but this percentage is insignificant (only 5% of consumers in cluster 1, the highest rate is in cluster 4 (35%).

Baby food is in great demand among consumers in cluster 1, including many women with children (almost 50% of all consumption in this group of goods). However, even in cluster 4, the volumes are much lower – 32% of consumers regularly buy baby food. According to the indicator «Periodically buy» there is an upward trend in the movement to cluster 4. Compared to other groups of goods in the category «Baby food» the smallest number of respondents admitted that they are unfamiliar with the features of these goods. As part of the consumer behavior analysis in the healthy food segment, the authors checked for whom consumers buy these products. They choose millennials and buzzers, people aged 26-39 and 18-25, respectively. Persons under 18 are not considered because they make up a small proportion of the sample (less than 2%). The respondents' answers were distributed, as Table 3 shows. The responses of the respondents in the groups of buzzers and millennials differ. People aged 18-25 are more likely than others to buy goods for themselves, while people aged 26-39 tend to buy goods for parents or children) or buy them for themselves and members of their families and/or pets. The vast majority of people over the age of 39 buy healthy products for themselves (Table 3).

Table 3. Group statistics to compare buzzers and millennials by answering the question of whom they buy healthy food

Answer	Count/percent	Age					Total
		18-25	26-39	40-50	51-60	Older than 60	
To close people	Count	15	41	5	6	4	71
	%	28,3%	53,9%	38,5%	40,0%	26,7%	
Themselves	Count	35	33	8	7	9	92
	%	66,0%	43,4%	61,5%	46,7%	60,0%	
Pets	Count	3	2	0	2	2	9
	%	5,7%	2,6%	0,0%	13,3%	13,3%	

Continued Table 3

Answer	Count/percent	Age					Total
		18-25	26-39	40-50	51-60	Older than 60	
Total	Count	53	76	13	15	15	172
	%	100%	100%	100%	100%	100%	

Sources: developed by the authors.

A wide range of sources states that the price and taste of goods significantly influence their food market choices. The research aims to determine which factors most influence the decision to buy products of a healthy segment. Table 4 presents the results of the initial study. Given that the questionnaire provided an opportunity to choose several options when answering the question, the analysis is feasible using a dichotomous analysis method of multiple responses.

Table 4. Frequencies of respondents' answers to questions about the importance of certain factors for them when deciding to buy goods from the segment of healthy products

Indicators	Answers		Percentage of observations	
	N	Percentage		
Importance_of_factors	Price	62	29.7%	53.4%
	Taste	68	34.4%	61.9%
	Packaging	5	2.4%	4.2%
	Convenience	30	12.7%	22.9%
	Trust	8	13.7%	24.6%
	Region	9	4.7%	8.5%
	Environmental_friendliness	6	2.4%	4.2%

Sources: developed by the authors.

Table 5 shows the distribution of responses between respondents of different genders to questions about the parameters of products that they pay attention to when making a purchase decision. For women, the more critical parameter when choosing a product is the price than for men. The taste of the product is equally important for both men and women. For men, the convenience of buying products is more important, and trust in the manufacturer. Hypothesis H4 about the greater importance of trust in the manufacturer for women than for men has not been confirmed.

The study's hypothesis on the essential consumer choice factors in the healthy foods segment was confirmed. It is estimated that the main factors are the taste of the product (73 answers), price (63 answers). Significantly fewer responses by factors such as trust in the product manufacturer (29 responses), ease of purchase (availability of the point of sale, ease of delivery, availability in the store, etc.) (27 responses).

Deloitte (2021) stated that among 1,600 respondents, the information that consumers in the Ukrainian market would like to see on product packaging includes information on whether the product is environmentally-friendly (or Zerowaste) (49% of respondents), information on whether the product belongs to the category of bio/organic (27% of respondents), information on whether the product packaging is environmentally friendly and/or biodegradable (24%). This study examined the extent to which respondents are aware of the labels of healthy products and whether they pay attention to these labels when buying goods. There are already some open research results on these issues. For example, in (Koshkalda et al., 2021), only 26% of the 800 Ukrainians surveyed understand the designation B on products (Table 5). Four labels were chosen to analyze the opinion of the respondents (Table 6).





Table 5. Distribution of answers of respondents of different sexes on the importance of specific parameters of the product when making a purchase decision

Parameter	Count/percent	Sex	
		Male	Female
Price	count	48	14
	percent	31,8%	23,7%
Taste	count	49	19

	percent	32,5%	32,2%
Packaging	count	2	3
	percent	1,3%	5,1%
Convenience	count	20	10
	percent	13,2%	16,9%
Trust	count	17	11
	percent	11,3%	18,6%
Region	count	6	3
	percent	4,0%	5,1%
Environmental friendliness	count	4	2
	percent	2,6%	3,4%

Sources: developed by the authors.

Table 6. Labeling of products of the healthy consumption segment, awareness of which and their importance for Ukrainian consumers, was tested

Marking	Labeling	Explanation
A		The signature labeled «Not tested on animals» was intentionally removed so that respondents mentioned the label without a hint. This label informs consumers that the product and none of its components have been tested on animals. This mark is used less and less because animal testing is prohibited.
B		This labeling means that the product's packaging material is made from recycled raw materials or contains a proportion of recycled material.
C		«Euroleaf» is the only sign of the European Union used to indicate the packaging of organic food grown without chemical fertilizers.
D		Market operators optionally use this label. The absence of genetically modified organisms in the food product must be confirmed following the requirements of the legislation. If the product contains GMOs, the proportion of which exceeds 0.9% of any ingredient, the labeling must include the world combination «with GMO».

Sources: developed by the authors.

Figure 5 shows the results of the study on the labels in Table 5. Respondents' answers are classified: a) met the mark; b) understand the meaning of the mark; c) pay attention to this mark when buying goods; d) did not meet the mark. It is assumed that if a person pays attention to the mark, accordingly, he/she understands its meaning.

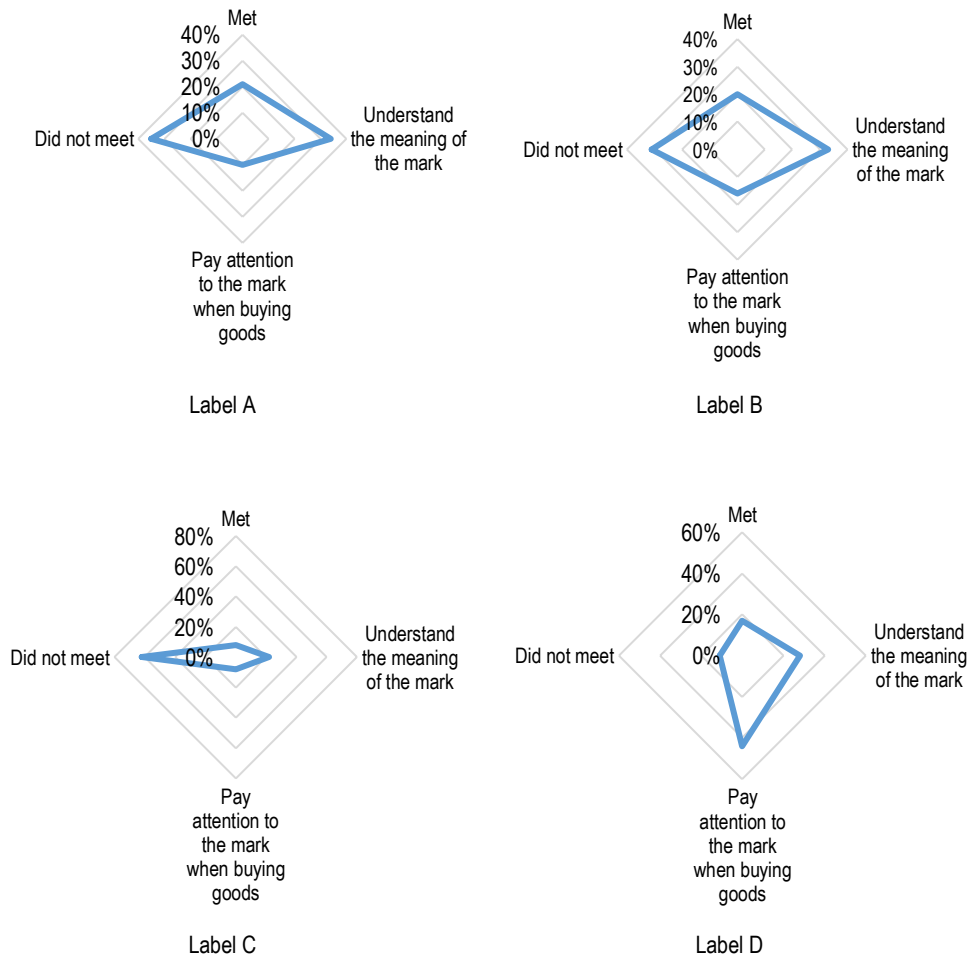


Figure 5. Consumer awareness of healthy segment labeling in the Ukrainian market
Sources: developed by the authors.

Respondents mostly pay attention to the label D when buying goods. The value of label A is understood by almost 40% of respondents, but because this sign is used less and less, they pay little attention or do not pay attention to it on the packaging of products. The percentage of awareness of C labeling among Ukrainian consumers was even lower than calculated in the study (Koshkalda et al., 2021). Label B is familiar to 35% of respondents, but the market is not yet ready to make purchasing decisions based on this labeling on the packaging (only 9% of consumers pay attention to it). The questionnaire was asked to estimate the awareness of another label related to the multi-colored strips on the tubes of toothpaste, cream, gel, etc., which are familiar to most consumers, because they are found on every product, such as toothpaste, used daily. Materials with misinformation about the meaning of this label (meaning environmental friendliness, product safety, abrasiveness) are often found on the Internet. Actually, this label on the tube is a sign for packaging machines. The sensor on the conveyor could read

this marking and cut off the tube in the right place. The color must contrast as much as possible with the background color (What do the colored stripes, 2021).

Most respondents did not consider this image superfluous among the other four labels. Only 17% of respondents considered it superfluous. This important aspect, namely the persuasiveness of the impact of online messaging on a significant number of consumers, must be taken into account. The same applies to unsubstantiated labels on products «100% natural», «healthy», «useful» and so on. Prospects for work in the health products segment are finding ways to eliminate false sources of information, encouraging manufacturers to disseminate only product-supported product information, and mass information work with a population on labeling healthy products, properties of such products and correct use of certain products.

An essential role in promoting the products of the healthy food segment in the Ukrainian market is a well-developed set of marketing channels, which, according to consumers, are reliable sources of information. For these reasons, the study analyzed the opinion of respondents about the sources from which, in their view, it is possible to obtain reliable information about the characteristics of products in a healthy segment.

Respondents could give several answer options, so the calculation was performed by analyzing multiple answers. According to the study results, the most reliable source of information about healthy foods, consumers consider information from specialists (doctor, nutritionist, trainer, etc.) (25.2% of responses). In second place are information portals on the Internet (18.4%). It is noteworthy that this source of information was indicated as reliable not only by young people but also by older respondents – aged 40-60 years. In third place as a source of information that can be considered reliable was the information they receive in communication with acquaintances (16.4% of responses). Other sources of information were on the lower positions in the reliability rating: information at points of sale (including sales consultations) – 13.2% of responses, online consumer feedback – 12.8% of responses, social media pages – 10% of responses; information in offline media – 4% of responses. It is worth noting that respondents who chose only one answer mostly mentioned the reliability of information from a specialist and the information they receive at points of sale.

It is worth paying attention to this, as it is evident that there is a need for a personalized approach to conveying information about healthy segment products to consumers because they trust the real person more than impersonal information pages on the Internet. As Internet marketing is gaining momentum and is a convenient tool for marketing campaigns among the target audience, it is advisable to plan all activities even in a network with a personalized approach, involving real people, professionals, opinion leaders to disseminate information about healthy products to the general public. An important question remains which products in the Ukrainian market consumers identify with the healthy products because some consider the product as such if it does not contain harmful impurities. Other consumers include the product in this segment if it is a baby food product. More advanced in healthy consumption say that these products are goods with useful impurities, specific ingredients, specific properties for the human body, etc. The authors grouped the brands that respondents indicated as healthy foods in Table 7. The largest number of unique brands consumers named among dairy producers. It is noteworthy that consumers in the Ukrainian market are guided by brands of purely healthy food, which position themselves as such and produce products from relevant, useful ingredients. Also, many brands have been named in the baby food segment. The category «Other food products» included single, but often found in the answers, brands of producers of oil, meat products, bakery products, etc.

Table 7. Brands most often found in the respondents' answers as producers of healthy food products

No	Category	Brands
1	Organic products	Medusha, Rodynna pasika, EtnoProdukt

2	Baby food	Chudo-chado, Rastishka, Myasniashky, Karapuz, Milupa, Hipp, Maliutka
3	Sports nutrition products	PROFIPROT, Nestle Fitness, XS Sports Nutrition
4	Dietary supplements	Nedria, Solgar
5	Positioning themselves as healthy food brands	Yaro, FtuTim, Bez Sakhara, TOM, «PEP HEMP. Kod dovolittia», Eat Easy, Healthy&Wealthy, Organic food, Green Day, Eco Choice, Zhyva kukhnia, Dobroiizh, Svitovi tradytsii, Rostok
6	Dairy products	Molokiia, Yahotynskyyi, Aktyvia, Pani Khutorianka, Mashenka, Pyriatyn, Dobriana, Harmoniia, Slovianochka, President
7	Products of the juice and mineral water segment	Biola, Morshynska, Myrhorodska
8	Other food products	Olivia, Oleina, Kurochka Riaba, Skvyrianka

Sources: developed by the authors.

Conclusions. To sum up, the market for healthy products, particularly healthy foods, is at the stage of formation and growth. New brands appear gradually, rather than an avalanche, which is typical, for example, for entertainment brands, digital products, conquering consumers. The Internet and tools for promoting the brand online open up significant opportunities for manufacturers of healthy products. Thus, at the formation of marketing strategies, it is expedient to pay attention to the personalization of dialogue with the target audience as the reliable information in a segment of healthy products consumers prefer to receive from real persons (experts or simply acquaintances). Consumer behavior is dominated by rational motives and care for their health and the health of loved ones. Consumers who found themselves happy were also more active advocates of healthy products and more knowledgeable in the segment of such products. Factors that most influence consumers' choices in a healthy segment include price, taste, and, to a lesser extent, trust in the producer. Most of the hypotheses of the study were confirmed. H1 on the invariability of purchasing power of a specific group of consumers was approved. H2 was confirmed as the results show that consumers who feel happier are more active in buying products of the healthy segment. The authors approved H3 about the significance of price and taste of the products in purchasing behavior. H4 was not confirmed because, on the contrary, trust in the manufacturer is a more significant factor for males than for females.

The results of this study can be useful for healthy food producers who sell them on the Ukrainian market and plan large-scale marketing programs. The material presented in the article will also be of interest to representatives of related fields and professionals involved in developing and implementing marketing strategies in the health products segment.

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References

Akbari, M., Ardekani, Z. F., Pino, G., & Maleksaeidi, H. (2019). An extended model of Theory of Planned Behavior to investigate highly-educated Iranian consumers' intentions towards consuming genetically modified foods. *Journal of Cleaner Production*, 227, 784-793. [[Google Scholar](#)] [[CrossRef](#)]

- Alaimo, L. S., Fiore, M., & Galati, A. (2020). How the COVID-19 pandemic is changing online food shopping human behaviour in Italy. *Sustainability*, 12(22), 9594. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- Bilan, Y., Lyeonov, S., Stoyanets, N., & Vysochyna, A. (2018). The impact of environmental determinants of sustainable agriculture on country food security. *International Journal of Environmental Technology and Management*, 21(5-6), 289-305. [\[Google Scholar\]](#)
- Bilan, Y., Pimonenko, T., Starchenko, L. (2020). Sustainable business models for innovation and success: Bibliometric analysis. Paper presented at the E3S Web of Conferences, , 159. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- Bilan, Yu. V., Nitsenko, V. S., Samoilyk, Iu. V. (2017). Conceptual modeling of agri-food market development under economy's globalization. Scientific bulletin of Polissia, 3, 54-61. [\[Google Scholar\]](#)
- Carson, R. (2020). Inclusiveness, Growth, and Political Support. *Eastern Economic Journal*, 46(4), 557-575. [\[Google Scholar\]](#)
- Chen, P. J., & Antonelli, M. (2020). Conceptual Models of Food Choice: Influential Factors Related to Foods, Individual Differences, and Society. *Foods*, 9(12), 1898. [\[Google Scholar\]](#)
- Deloitte. (2021). Consumer sentiment of Ukrainians in 2020. Retrieved from [\[Link\]](#)
- Egnell, M., Ducrot, P., Touvier, M., Allès, B., Hercberg, S., Kesse-Guyot, E., & Julia, C. (2018). Objective understanding of Nutri-Score Front-Of-Package nutrition label according to individual characteristics of subjects: Comparisons with other format labels. *PLoS One*, 13(8), e0202095. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- Gupta, J., & Vegelin, C. (2016). Sustainable development goals and inclusive development. *International environmental agreements: Politics, law and economics*, 16(3), 433-448. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- Hansen, T., Sørensen, M. I., & Eriksen, M. L. R. (2018). How the interplay between consumer motivations and values influences organic food identity and behavior. *Food Policy*, 74, 39-52. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- Helne, T. (2021). Well-being for a better world: the contribution of a radically relational and nature-inclusive conception of well-being to the sustainability transformation. *Sustainability: Science, Practice and Policy*, 17(1), 221-231. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- Hens, L., Melnyk, L., Matsenko, O., Chygryn, O., & Gonzales, C. C. (2019). Transport economics and sustainable development in Ukraine. *Marketing and Management of Innovations*, (3), 272-284. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- Kolosok, S., Pimonenko, T., Yevdokymova, A., Nazim, O. H., Palienko, M., & Prasol, L. (2020). Energy efficiency policy: impact of green innovations. *Marketing and Management of Innovations*, 4, 50-60. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- Koshkaldia, I., Bezuhla, L., Nihatova, O., & Ilchenko, T. (2021). The role of organic brand in the development of farmers association: Evidence from Ukraine. *Advanced Trends in ICT for Innovative Business Management*. CRC Press. Retrieved from [\[Link\]](#)
- Kumar, S., Dhir, A., Talwar, S., Chakraborty, D., & Kaur, P. (2021). What drives brand love for natural products? The moderating role of household size. *Journal of Retailing and Consumer Services*, 58, 102329. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- Kuzior, A., Lyulyov, O., Pimonenko, T., Kwilinski, A., & Krawczyk, D. (2021). Post-Industrial Tourism as a Driver of Sustainable Development. *Sustainability*, 13(15), 8145. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- Lauret, T., & Benedetti, I. (2018). Exploring pro-environmental food purchasing behaviour: An empirical analysis of Italian consumers. *Journal of Cleaner Production*, 172, 3367-3378. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- Liu, C. Y., Hu, F. Z., & Jeong, J. (2020). Towards inclusive urban development? New knowledge/creative economy and wage inequality in major Chinese cities. *Cities*, 105, 102385. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- Lyulyov, O., Pimonenko, T., Stoyanets, N., & Letunovska, N. (2019). Sustainable Development of Agricultural Sector: Democratic Profile Impact Among Developing Countries. *Research in World Economy*, 10(4), 97-105. [\[Google Scholar\]](#)
- Myronova, N. (2021). Trends in healthy eating 2021: how to combine delicious with healthy. Retrieved from [\[Link\]](#)
- Pimonenko, T., Bilan, Y., Horák, J., Starchenko, L., & Gajda, W. (2020). Green brand of companies and greenwashing under sustainable development goals. *Sustainability*, 12(4), 1679. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- PwC. (2021). Preparing to work with a new generation of consumers today: the future of consumer markets. Retrieved from [\[Link\]](#)
- RAU. (2018). Healthy food: natural food has become a trend (2018). Retrieved from [\[Link\]](#)
- Ricci, E. C., Banterle, A., & Stranieri, S. (2018). Trust to go green: an exploration of consumer intentions for eco-friendly convenience food. *Ecological economics*, 148, 54-65. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- Samusevych, Y., Vysochyna, A., Vasylieva, T., Lyeonov, S., & Pokhylko, S. (2021). Environmental, energy and economic security: Assessment and interaction. In *E3S Web of Conferences* (Vol. 234, p. 00012). EDP Sciences. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- SSSU. (2020). Balances and consumption of the main food products by the population of Ukraine. Retrieved from [\[Link\]](#)
- Teletov, A., Nagornyi, Y., Letunovska, N., & Shevliuga, O. (2017). Competitive and sustainable technological development: Focus on business enterprises. *Journal of Security and Sustainability Issues*, 6(3), 491-500. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- Tiutiunyk, I. V. (2018). Determination of Priority Financial Instruments of Regional Sustainable Development. *International journal of ecology & development*, 33 (3), 11-18. [\[Google Scholar\]](#)
- Tiutiunyk, I., Vasylieva, T., Bilan, Y., & Kovalenko, E. (2020). The Impact of Industry 4.0 On the Level of Shadow Employment. The Impact of Industry 4.0 On Job Creation 2019: Proceedings of scientific papers from the international scientific conference. Slovak Republic: Publishing House Alexander Dubcek University in Trencin, 405-413.
- Vakulenko, I., & Myroshnychenko, I. (2015). Approaches to the Organization of the Energy Efficient Activity at the Regional Level in the Context of Limited Budget Resources during the Transformation of Energy Market Paradigm. *Environmental & Climate Technologies*, 15(1). [\[Google Scholar\]](#) [\[CrossRef\]](#)

N., Letunovska, O., Yashkina, L., Saher, F. A., Alkhashrami, Yu., Nikitin. Analysis of the Model of Consumer Behavior in the Healthy Products Segment as a Perspective for the Inclusive Marketing Development

Vasylieva, T., Lyulyov, O., Pimonenko, T., Vojtovič, S., & Bilan, Y. (2020). Financial, socio-economic, environmental and public health patterns of creating regional roadmaps to prevent the spread of the COVID-19 epidemic. *Financial and credit activity: problems of theory and practice*, 4(35), 295-310. [\[Google Scholar\]](#) [\[CrossRef\]](#)

Vysochyna, A., Kryklii, O., Minchenko, M., Aliyeva, A. A., & Demchuk, K. (2020a). Country innovative development: impact of shadow economy Marketing and Management of Innovations, 4, 41-49. [\[Google Scholar\]](#) [\[CrossRef\]](#)

Vysochyna, A., Stoyanets, N., Mentel, G., & Olejarz, T. (2020b). Environmental determinants of a country's food security in short-term and long-term perspectives. *Sustainability*, 12(10), 4090. [\[Google Scholar\]](#) [\[CrossRef\]](#)

What do the colored stripes on the tube of toothpaste mean? (2021). Retrieved from [\[Link\]](#)

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Аналіз споживчої поведінки у сегменті здорового харчування як перспектива розвитку інклюзивного маркетингу

У статті проаналізовано споживчу поведінку на ринку здорового харчування України та визначено тренди розвитку сегменту продуктів здорового харчування. Основною метою статті є визначення головних патернів поведінки населення України щодо споживання продуктів здорового харчування. У ході дослідження з'ясовано ступінь зацікавленості споживачів у продуктах здорового харчування. Змодельовано залежність між рівнем щастя населення та споживанням продуктів сегменту здорового харчування. Авторами виокремлено фактори, які впливають на вибір продуктів аналізованого сегмента. Визначено ступінь обізнаності споживачів щодо типового маркування продуктів сегменту здорового харчування. За результатами дослідження встановлено доцільність використання окремих інформаційних каналів для взаємодії зі споживачами на ринку продуктів здорового харчування у контексті формування стратегій інклюзивного маркетингу. Методологічною базою дослідження є маркетингове дослідження громадян України, а саме методи онлайн-опитування в формі анкетування та офлайн-опитування шляхом заповнення респондентами друкованих анкет. Запитання анкети було поділено на блоки, що дозволило визначити а) зацікавленість респондентів у продуктах сегменту здорового харчування та загальні поведінкові патерни при виборі продуктів цієї категорії; б) обізнаність споживачів щодо основних видів маркування на упаковці товарів здорового харчування; в) поінформованість споживачів про наявні продукти здорового харчування та особливості купівлі цих товарів окремою людиною; г) ступінь довіри до маркетингових каналів інформування про продукти здорового харчування серед населення України. Результати дослідження можуть бути корисними виробникам продуктів здорового харчування, представникам суміжних сфер діяльності, які прямо пов'язані з сегментом продуктів здорового харчування, а також фахівцям, які займаються розробленням та реалізацією стратегій їх просування.

Ключові слова: споживання продуктів здорового харчування, ринок харчових продуктів, поведінкові патерни, маркетингові канали, маркування на упаковці продуктів, маркетингове дослідження, інклюзивний розвиток.