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Typology of Consumers According to the Declared Consumption of Food Products and Non-Alcoholic Beverages. Polish and Slovakian Case Studies

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Abstract: The aim of the paper is to create a typology of consumers based on the consumption of food products and non-alcoholic beverages for two countries. The research was conducted among non-randomized respondents representing 900 Polish and 300 Slovakian households. The Polish part of the study was carried out in the Silesian and Mazovian provinces. The Slovakian part of the study was carried out in the whole country. To identify four groups of consumers, the paper used the clustering of objects method, especially the Two-Step method: Ward (hierarchical) cluster analysis and non-hierarchical k-means cluster analysis. The authors represent the difference in the results achieved between types of consumers. Poles and Slovaks similarly perceive the financial status of their households and the attention paid to food price when buying it. However, there is a significant difference in food consumption. When eating, Slovaks are influenced more by vegetarian and vegan fashion trends and emotional experience than price. On the contrary, Poles are more interested in the health aspect of the food consumed and its quantity when emphasizing the price, which results from being less financially satisfied. The results of the research provide information about changes in consumer attitudes in the researched area and their thinking about their consumption, respectively lifestyle, and illustrate some trends in consumer behavior for the current and post-COVID-19 era.

Keywords: consumer behavior; households; food consumption; non-alcoholic beverages; cluster analysis; Poland; Slovakia



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1. Introduction

People make decisions regarding food consumption based on different motives and in other ways [1]. Retail markets in Poland and Slovakia are highly saturated, stressing the need for managers to understand the existing competitive structure for putting in place strategies, allowing retail chains to survive [2,3]. Responding to the theoretical and managerial importance of the subject, this study aims to identify and develop a more detailed typology of the consumer in the food market that answers significant and previously unexamined concerns about comparing a level of development the consumer society in Poland and Slovakia.

We formulated research questions on the consumption of food and non-alcoholic beverages to assess perceived health and purchase intentions by different consumer segments. It meant to investigate that Polish or respectively Slovakian consumers have a positive, more or less significant attitude towards foods concerning their health. In addition, attitude is the most reliable link, including the behavior of food [4–6]. Therefore, Nystrand and Olsen [7] highlight nutrition and health knowledge and information; cognitive and

sufficient antecedents such as attitudes, perceptions and beliefs, product properties, and sociodemographic variables as important for consumer choices regarding food. The authors intend to answer the following research questions:

- RQ1: How are Poles and Slovaks significantly similar or different in their shopping of food, respectively?
- RQ2: What type of customers are distinctive in the shopping of food for Poles and Slovaks?
- RQ3: Which factors influence the decision of customers to shop for healthy food to make them satisfied?

The main contributions of this paper are two-fold. Firstly, a lot of attempts have compared Polish and Slovakian consumers separately in previous studies based on purchasing consumers' habits approach with a variable number of consumers segments. This study confirms the existence of four main and common types of food consumers in such a comparison of two nations. Secondly, we contribute to marketing literature on the typology of consumers [8–14]. Specifically, we extend this literature's coverage from the traditional manufacturer–retailer–consumer distribution chains (in which consumers merely supply their monies when purchasing end-products) to cover detailed behavioral patterns taking into consideration the intention to consume healthy foods as the only significant predictor of development a new business model based on values such as health or natural resources.

This paper is organized as follows: Section 2 defines the theoretical framework, and Section 3 presents the methodology of the research undertaken. First of all, it presents the course of the surveys conducted, followed by the applied data analysis methods, such as cluster analysis. Section 4 presents the research results and the analysis undertaken by the authors, namely the description of four separate segments of food consumers. Section 5 discusses the research results obtained. Section 6 presents the conclusions from the conducted research and analyses, as well as the main limitations and future research directions.

2. Literature Review

Both countries are very young consumer societies with features of which are reflected in the daily purchasing behavior of households. The changes in consumption of both nationalities are connected with accepting the values of a consumer society and are changing consumer behavior of households which are gradually getting to the maturity phase of the consumer cycle [15]. Having acknowledged the above, this study focuses on identifying drivers of consumers' intentions to purchase food. This study undertakes a survey to investigate and provide empirical evidence on likely links between intentions to satisfy abundance and to buy health food products with such factors as brand awareness, perceived quality, value and risk in the context of supply chains in both countries. The findings have not only useful implications for store brand management, they can also lead to the emergence of new kinds of business models labelled by the denotation of consumer-to-business C2B [16], when individual consumers may play a key role in supply chains, inputting and putting forward certain supplies to a supply chain otherwise dominated by business firms.

Generally each firm (manufacturer, retailer) and its sales techniques promoting products or services must adapt to different consumer behaviors. Two factors influence consumer behavior:

- Self-confidence, i.e., the scale of which the individual has control over situations, thoughts, emotions [17], and actions of others;
- Mood, i.e., level of emotional expression and relational development with others [18].

In addition, J. Szwicka-Mokrzycka [19] claims that a process of globalization continues to progress as a result of the unification of consumer behavior patterns in the global perspective. Previous findings show that social pressure exerted by others, especially

regarding economic and symbolic criteria, also influences consumption [8,9]. Table 1 summarizes the main findings of previous studies on expressive attributes.

Table 1. Overview of consumer typologies.

Authors	Criteria of Identification	Identification of Shopper Types by Expressive Attitudes
Stone, G.P. (1954) [20]	Demographic, psychographic, lifestyle, choice	Economic shoppers, personalizing shoppers, ethical shoppers, apathetic shoppers
Lumpkin, J.R. (1984) [10]	Age	Active apparel shoppers, the uninvolved (apathetic) shoppers, economic shoppers
Robertson, D.H.; Greenberg, B.A. (1977) [11]	Importance of certain patronage motivations of shopping-centre customers	Recreational shoppers, economic/convenience shoppers
Boedeker, M.; Marjanen, H. (1993) [12]	Choice, age	Convenience seekers without cars, new type shoppers, traditional shoppers, product shoppers, individualistic quality seekers, inactive shoppers
Gicquel, I.; Castéran, H. (2016) [13]	Usage and shopping throughout the cycle	Enthusiastic shoppers, apathetic shoppers, pragmatic shoppers

Source: Kita, P.; Križan, F.; Bilková, K.; Zeman, M.; Siviček (2020) [21].

There are many types of consumer identities [22]. It should be noted that a single identity term can bridge various classifications leading to provide a more comprehensive typology of consumers. Therefore, Table 1 demonstrates only the typologies relevant to our research. For this reason, the product conception should take into account two criteria, i.e., the economic and the symbolic ones, with the aim of better satisfying the trend of individualization and growing materialism in behavior of the consumers. From the economic point of view, the products should represent a set of qualities which are bringing extraordinary value for a consumer. From a symbolic point of view, the products should be characterized by non-material aspects which are close to him/her. On the basis of the above mentioned, marketers are permanently asking the questions how a new consumer buys their products and whether he/she is satisfied with their consumption. Despite the fact that the Polish and Slovak consumption models are becoming more and more similar to the ones observed in other EU countries, there are still essential differences within them. Further, recognizing what kind of consumer visits the retail unit helps the effort to tailor the offering to better suit consumer needs and demands, thus classifying them into different types. Hence, the recognition of different types of consumer personalities enables appropriate adequate behavioral models for sales personnel [23,24].

3. Materials and Methods

3.1. Sample and Data Collection

The empirical part of the paper is based on the results of primary research, designed and carried out by the authors of the study, using a standardized questionnaire. The performed surveys were quantitative. The research was completed in the first half of 2019, i.e., before the outbreak of the COVID-19 epidemic in Poland and Slovakia. The research was comparative, but only in a limited form. Prior to conducting the study, the questionnaire was piloted to eliminate possible errors of the research tool and to assess its validity and usefulness to attain the research objectives.

The research was conducted among non-randomized respondents representing their households from Poland and Slovakia. The decision to choose a non-random sampling was motivated primarily by the lack of an appropriate sampling frame and the need to reduce

research costs. The authors wanted to research with the most competent people, given the purpose of the study. During the initial interview, the researchers recruited for the study only those individuals who were responsible in their household for food shopping and meal preparation. Given this, the respondents qualified for the sample were adults responsible for purchasing food and preparing meals for households. They were mostly women–housewives (82.2% of Polish and 88.7% of Slovak respondents). The Polish part of the research was conducted in Silesia and Mazovia Provinces. These regions were selected for the survey area as they are the most industrialized, urbanized areas with the largest chain of grocery stores and catering services in Poland. They are also the two most densely populated provinces in Poland. In 2019, Silesia Province was inhabited by 4.5 million people, i.e., 11.8% of the population of Poland, and Mazovia Province was inhabited by 5.4 million people, i.e., 14.1% [25]. The undertaken research spectrum was extended to include Slovakia due to the cultural and geographical proximity of both countries. The number of people living in Slovakia is also not without significance (5.5 million inhabitants according to the Statistical Office of the SR) [26], comparable to the number of people living in both Silesia and Mazovia Provinces.

The sample size in each of the studied areas was set at 300 households. Such a sample size provides results with a measurement error of no more than 3%, with a confidence level of 0.95. The accepted condition has been met. The study was completed when a total of 900 complete and correctly filled in questionnaires were received (300 each from Silesia and Mazovia Provinces, and 300 from Slovakia). At the same time, it should be remembered that the size of the sample does not depend on the size of the population but on the degree of its homogeneity. The more homogeneous the population (in terms of selected features) is, the smaller the sample size can be [27].

The sample of Polish consumers includes respondents from various households (Table 2).

Table 2. Characteristics of the tested sample ($n = 900$).

Item		Poland ($n = 600$)	Slovakia ($n = 300$)
Persons responsible for food purchases and meal preparation in the household	Housewife	82.2 %	88.7%
	Househusband	17.8%	11.3%
Age of people responsible for food purchases and meal preparation in the household	Median age of the housewife	45 years	46 years
	Median age of the househusband	48 years	48 years
	The youngest respondent	19 years	21 years
	The oldest respondent	82 years	89 years
Education level of people responsible for food purchases and meal preparation in the household	Primary/lower secondary	5.3%	0.4%
	Vocational	18.3%	9.0%
	Secondary	47.3%	50.4%
	Higher	29.1%	40.2%
Number of people in the household	1	16.0%	12.4%
	2	20.7%	26.1%
	3	20.8%	24.4%
	4	30.2%	27.8%
	5 people and more	12.3%	9.4%
Subjective assessment of the financial situation of own household	Very bad and bad	2.8%	1.8%
	Average	34.5%	29.5%
	Good	47.5%	48.8%
	Very good	15.2%	20.4%
Place of residence	Rural area	19.0%	18.4%
	City	81.0%	81.6%

Source: own study.

Most often, they were four person households (30.2%) as well as two and three person households (20.7% and 20.8%, respectively). Single person households (16.0%), as well as five and more-person households (12.3%), were relatively less numerous. The sample was dominated by consumers from cities (81.0%), among whom the largest group were respondents from cities with more than 200,000 inhabitants. Rural consumers accounted

for 19.0% of the respondents. When asked about the financial situation of their household, the survey participants most often admitted that it was good or average (47.5% and 34.5%, respectively). A bad or very bad situation was declared by 2.8%, while a very good situation—by 15.2% of the respondents. The vast majority of the respondents had secondary education. The youngest respondent was 19 years old—the oldest one was 82 years old. The median age of the housewife was 45, the househusband—48.

The sample of respondents from Slovakia consisted of the highest number of respondents from four-person (27.8%) and two-person (26.1%) households (Table 2). There were also slightly fewer three person households (24.4%). The smallest percentage in the studied sample was composed of a single person household as well as five-and-more-person households (12.4% and 9.4%, respectively). In the analyzed sample, consumers living in rural areas accounted for 18.4%. The rest lived in towns of up to 50,000 inhabitants (27.1%), from 51,000–100,000 (26.4%) and more than 100,000 inhabitants (28.1%). The survey participants from Slovakia, when asked about the assessment of the financial situation of their households, most often admitted that it was good (48.8%) or average (29.5%). Bad or very bad financial standing was declared by 1.8%, while a very good situation by 20.4%. Most of the respondents had secondary education. The youngest respondent was 21 years old—the oldest was 89. The median age of the housewife was 46. The househusband was 48 years old.

Due to the non-random selection of respondents for the study, the samples taken show some discrepancies with the general populations of Poland and Slovakia [28,29]. Therefore, the typologies presented further on should be interpreted with caution.

3.2. Measures

In order to find answers to the research questions, two scales of food and non-alcoholic beverage consumption were used, covering 17 assortment groups of food and non-alcoholic beverages.

The scale was written in the form of a seven-point ordinal scale, where the number -3 meant “I strongly disagree” and the answer $+3$ “I strongly agree.” The reliability of the scale used in the study was confirmed by Cronbach’s alpha test. The Cronbach alpha value of the food and non-alcoholic beverage consumption scale was 0.725 (Polish version) and 0.711 (Slovak version). Therefore, if we assume that the permissible level of the α coefficient >0.7 , as proposed by Nunnally and Bernstein [30], the scales used in the study can be considered reliable.

Cluster analysis was used to distinguish relatively homogeneous groups (types) of consumers in terms of consumed food and non-alcoholic beverages, whose numerous applications in consumer behavior research are mentioned, among others, by Walesiak [31] (pp. 344–347). Work on the described typologies was carried out according to three stages proposed by Kusińska [32] (pp. 88–89):

- Stage I—adopting the typology criteria, i.e., selecting a set of diagnostic variables on the basis of which the typology will be carried out;
- Stage II—delimitation, i.e., the grouping of households according to the adopted diagnostic criterion by adopting cluster analysis;
- Stage III—evaluation and verification of the results obtained and profile development of selected clusters, taking into account active and descriptive variables (social, economic, and demographic characteristics).

The mentioned measurement scales were used to carry out the typology. The types of consumers were distinguished in two steps. The first step was the Ward (hierarchical) cluster analysis applied with the square of the Euclidean distance, the second step was the non-hierarchical k-means cluster analysis. The use of both methods results from methodological limitations [33] (pp. 407–421). The non-hierarchical analysis is less sensitive to abnormal observations and incorrect variables, prompting better results. However, it requires specifying the target number of distinguished groups of units, which is not

predetermined. To obtain this information, a hierarchical cluster analysis should be used first [34].

The analysis of the agglomerative coefficient and the dendrogram, obtained by means of the stratified analysis using the Ward method, led to the selection (in both cases) of four types of consumers (the first clear jump in the agglomerative distance, cut-off point 10). After conducting non-hierarchical analysis, their centroids (centers of gravity) were finally determined, and each object was assigned to the group whose centroid is closest to it [35], then the distinguished types were given subjective names that best reflect the behavioral characteristics of the studied individuals assigned to given types. As a result, two typologies of consumers were obtained according to two groups of diagnostic variables. Moreover, each typology was worked out separately for Polish and Slovak consumers. All calculations were carried out with the use of IBM SPSS Statistics 26 (version 6.0 for Windows). Licenses granted by Predictive Solution Sp. z o.o. (formerly SPSS Polska) for the University of Economics in Katowice and Warsaw University of Life Sciences.

4. Results

4.1. Typology of Polish Consumers

As a result of the conducted analyses, four relatively homogeneous types of Polish consumers were distinguished. The size of types (the number of observations in each type) and their names are presented in Table 3.

Table 3. Types of Polish consumers by consumed food products and non-alcoholic beverages.

Cluster/Type	Name	No. of Observations	% of Observations
I	Healthy food enthusiasts	104	17.3
II	Foodies	272	45.3
III	Price sensitive	164	27.3
IV	Dieticians	60	10.0
	Significant	600	100.0
	Limitations	0	0.0

Source: own study.

The first identified cluster (type I) consists of consumers who, among the distinguished types, most often declared the consumption of large amounts of bread and other cereal products as well as vegetables and fruits (nearly 100% of the answers were affirmative). Cluster I consumers most often declared eliminating sweetened non-alcoholic beverages from their diets, preferring to drink tea (96.2%) (Table 4). Thus, the surveyed consumers of type I confirmed a great willingness and awareness of healthy eating. Vegetables and fruits, followed by cereal products, especially whole grains, form the basis of a healthier diet recommended by both the World Health Organization (WHO) [36], the National Institute of Public Health NIH-National Research Institute [37], and Public Health Authority of the Slovak Republic [38]. Cluster I consumers could therefore be described as “healthy food enthusiasts.” They constitute the third largest group of respondents (17.3%) in the sample taken.

The awareness and willingness to eat healthy is also visible in type I responses given by consumers about the nutrition of their families. The surveyed consumers of cluster I most often stated that their family eats healthy (84.6%) and that their nutritional needs are fully met (93.3%) (Table 5).

Households of type I consumers are usually four person households from rural areas and cities up to 50,000 inhabitants, headed most often by housewives aged 36–49 (Table 6).

Table 4. Characteristics of the types of Polish consumers by consumed food and non-alcoholic beverages ($n = 600$, in %).

Items	Answer	Consumer Types			
		I	II	III	IV
Milk and dairy products	Affirmative	91.3	93.0	78.0	16.7
	Neither yes nor no	1.9	3.7	12.2	25.0
	Negative	6.7	3.3	9.8	58.3
Bread and other cereal products	Affirmative	97.1	96.7	96.3	41.7
	Neither yes nor no	2.9	2.6	2.4	18.3
	Negative	-	0.7	1.2	40.0
Vegetables	Affirmative	99.0	98.5	76.2	86.7
	Neither yes nor no	1.0	1.5	11.0	6.7
	Negative	-	-	12.8	6.7
Fruits	Affirmative	99.0	97.1	73.8	65.0
	Neither yes nor no	1.0	2.6	12.8	18.3
	Negative	-	0.4	13.4	16.7
Meat and meat products	Affirmative	91.3	97.8	91.5	70.0
	Neither yes nor no	6.7	0.7	4.3	13.3
	Negative	1.9	1.5	4.3	16.7
Fish and fish products	Affirmative	63.5	75.0	29.9	31.7
	Neither yes nor no	21.2	15.8	23.2	23.3
	negative	15.4	9.2	47.0	45.0
Seafood	Affirmative	4.8	12.5	4.9	6.7
	Neither yes nor no	6.7	17.3	4.9	3.3
	Negative	88.5	70.2	90.2	90.0
Sugar and sweets	Affirmative	60.6	89.3	78.7	23.3
	Neither yes nor no	21.2	8.1	15.9	8.3
	negative	18.3	2.6	5.5	68.3
Eggs	Affirmative	93.3	96.7	80.5	73.3
	Neither yes nor no	4.8	1.1	12.8	8.3
	Negative	1.9	2.2	6.7	18.3
Legume seeds	Affirmative	18.3	6.6	68.3	25.0
	Neither yes nor no	26.9	25.7	23.8	28.3
	Negative	54.8	67.6	7.9	46.7
Vegetable fats	Affirmative	72.1	89.7	52.4	65.0
	Neither yes nor no	17.3	8.5	20.7	13.3
	Negative	10.6	1.8	26.8	21.7
Animal fats	Affirmative	50.0	79.0	52.4	55.0
	Neither yes nor no	25.0	15.4	17.1	21.7
	Negative	25.0	5.5	30.5	23.5
Nuts	Affirmative	60.6	74.6	12.8	53.3
	Neither yes nor no	25.0	20.2	17.7	20.0
	Negative	14.4	5.1	69.5	26.7
Non-alcoholic beverages—unsweetened	Affirmative	94.2	97.4	89.0	86.7
	Neither yes nor no	1.0	1.8	6.7	3.3
	Negative	4.8	0.7	4.3	10.0
Non-alcoholic beverages—sweetened	Affirmative	-	87.5	71.3	16.7
	Neither yes nor no	9.6	11.4	11.0	15.0
	Negative	90.4	1.1	17.7	68.3
Coffee	Affirmative	78.8	93.8	67.7	65.0
	Neither yes nor no	4.8	3.7	11.0	15.0
	Negative	16.3	2.6	21.3	20.0
Tea	Affirmative	96.2	94.5	91.5	63.3
	Neither yes nor no	2.9	3.6	3.7	15.0
	Negative	1.0	1.8	4.9	21.7

Note: The respondents marked their answers on a seven-point scale, where +3—strongly agree and −3—strongly disagree. The “affirmative” category was created by combining the responses marked with positive numbers on the scale, while the “negative” category was created by combining the responses marked with negative points on the scale. Answers marked with 0 created a “neither yes nor no” category. Source: own study.

Table 5. Opinions of Polish consumers on food and nutrition ($n = 600$, in %).

Item	Answer	Consumer Type			
		I	II	III	IV
My family eats healthy	Affirmative	84.6	63.2	48.2	81.7
	Neither yes nor no	12.5	17.6	26.2	11.7
	Negative	2.9	19.1	25.6	6.7
My family's food needs are fully met	Affirmative	93.3	87.1	79.9	90.0
	Neither yes nor no	2.9	5.9	9.8	5.0
	Negative	3.8	7.0	10.4	5.0
We seek dietary advice and recommendations when preparing meals	Affirmative	37.5	25.0	17.7	48.7
	Neither yes nor no	12.5	22.1	11.6	15.0
	Negative	50.0	52.9	70.7	36.3
We pay attention to food taste and smell when buying it	Affirmative	89.4	90.1	86.6	79.7
	Neither yes nor no	6.7	5.1	6.7	11.7
	Negative	3.9	4.8	6.7	8.7
We pay attention to food price when buying it	Affirmative	90.3	87.9	92.7	85.0
	Neither yes nor no	5.8	7.4	4.3	8.3
	Negative	3.8	4.8	3.0	6.7

Note: as in Table 4. Source: own study.

Table 6. Characteristics of Polish consumers' households ($n = 600$, in %).

Item		Consumer Type			
		I	II	III	IV
Households by age of the housewife	Up to 35	26.3	24.6	31.6	33.9
	36–49	37.4	45.1	39.4	25.0
	50+	36.4	30.3	29.0	41.1
Households by number of persons	1	19.2	12.5	17.1	23.3
	2	24.0	16.5	18.5	36.7
	3	19.2	23.2	20.1	15.0
	4	25.0	34.2	29.9	21.7
	5	12.5	13.6	14.4	3.3
Households according to subjective assessment of their own financial situation	Non-satisfactory	38.5	34.2	40.2	50.0
	Satisfactory	61.5	65.8	59.8	50.0
Households by place of residence	Up to 50 K	37.5	45.2	40.9	28.3
	50–100 K	11.5	14.0	10.4	5.0
	101–200 K	26.0	15.8	19.5	35.0
	200+ K	25.0	25.0	29.3	31.7

Source: own study.

In the studied sample, the second type of consumers was by far the most numerous group of respondents (45.3%) (Table 3). The surveyed consumers in Cluster II could be described as “foodies” who like to eat a lot and, in a variety of ways, not necessarily healthy. In 12 out of 17 examined product groups, this type of consumers most often declared consuming large amounts of the products in question among the remaining groups. On the one hand, they were fish, seafood, and dairy products recommended by WHO, and on the other—less recommended meat and meat products, animal fats, sugar, and sweets. The same was true for the consumption of non-alcoholic beverages. Type II consumers, among the types discussed, most often declared consuming large amounts of sweetened and unsweetened non-alcoholic beverages and coffee. The only product that does not meet the culinary tastes of the consumers of this group is the legume seeds, which are consumed the least among all the clusters selected (Table 4).

Referring to this group of consumers as “foodies” also results from the behavior they declare when shopping for food. The price is important to them, but not the most important thing. Most often, among the discussed types of consumers, they agreed with the statement: “We pay attention to food taste and smell when buying it” (over 90%) (Table 5).

Households in cluster II are most often run by women aged 36–49 years. They are four person households from rural areas and cities with up to 50,000 residents. These households are in relatively the best financial situation among the remaining respondents. Nearly 2/3 representing this type of households declared satisfaction in this area of their lives (Table 6).

The third type of consumers, identified as a result of the cluster analysis, are individuals who are generally not fond of vegetables and fruits or fish and seafood. More often than consumers qualified for the other types, they avoid fats, both vegetable and animal, and nuts in their diets. They also avoid coffee the most. Unlike type II consumers, they most often report consuming large amounts of legume seeds. Such a declaration was made by nearly 70% of respondents qualified to this group (Table 4).

Cluster III consumers least frequently agreed with the statement “my family eats healthy” (48.2%) and with the statement “my family’s food needs are fully satisfied” (79.9%). They also least frequently used dietary advice and recommendations (17.7%). However, the reason for such and no other choices in terms of food consumption of this consumer group maybe not so much the desire to eat healthy or ignorance in this area, but their financial situation. Consumers from this group most often agreed with the statement “we pay attention to food price when buying it” (92.7%), and the financial situation of their households was assessed as unsatisfactory by 40% of consumers in this group (Table 5). Therefore, these people can be defined as “price sensitive” consumers. The respondents creating this cluster came from five or more person households more often than others (Table 6). In total, consumers in this group form a cluster representing 27.3% of the respondents. This is the second most numerous type of consumer (Table 3).

The fourth and last distinguished type of consumers constitutes only 10.0% of all surveyed consumers (Table 3). They can be described as “dieticians.” This cluster is made up of individuals who declared the lowest consumption of the analyzed products in as many as 10 out of 17 analyzed food product categories as compared to consumers from the remaining three clusters. These are: milk and dairy products, bread and cereal products, fruits, meat and meat products, fish and seafood, sugar and sweets, and coffee and tea (Table 3). At the same time, these were the people who most often declared seeking dietary advice and recommendations among the respondents. Such a declaration was made by nearly half of the surveyed consumers in this group. On the other hand, relatively the least frequently among all the respondents, this cluster agreed with the statement “We pay attention to food taste and smell when buying it” (79.7%) (Table 4). The respondents forming cluster IV represented consumers, more often than others, from single or two person households, from cities with more than 100,000 inhabitants, headed by housewives aged 50 and over. Consumers in this group equally often assessed their financial situation as satisfactory as non-satisfactory (Table 6).

4.2. Typology of Slovak Consumers

A similar cluster analysis was then carried out for the surveyed consumers from Slovakia. In this case, it was finally decided to divide consumers into four types (cut-off point 10). The size of types and their names are presented in Table 7.

Table 7. Types of Slovak consumers by food and non-alcoholic beverages consumed.

Cluster/Type	Name	No. of Observations	% of Observations
I	Vegetarians and vegans	24	8.0
II	Sweet tooth	86	28.7
III	Moderate diet supporters	99	33.0
IV	Foodies	91	30.3
	Significant	300	100.0
	Limitations	0	0.0

Source: own study.

The first cluster grouped relatively few consumers—only 8.0% of the respondents (Table 7). Based solely on the hierarchical cluster analysis using Ward’s method, one could even decide to ignore this type and distinguish only three types of Slovak consumers. However, the analysis of clusters using the k-means method allowed us to notice clear differences between the first type and the other three distinguished clusters. Consumers

in this cluster are characterized by very clear preferences, favoring above everything else vegetarian and vegan food. These consumers consciously and deliberately exclude meat and meat products as well as fish and seafood from their diets. They also avoid other animal products, such as milk and dairy products, eggs, and animal fats. Type I consumers' diet is based on vegetables, fruits, and legume seeds. All respondents in this cluster declared consuming large amounts of these products. An important role in their diet is also played by nuts, which are consumed by 87.5% of the respondents, and among non-alcoholic beverages, tea (also 87.5%), while eliminating sweetened non-alcoholic beverages from the diet (Table 8). These consumers could therefore be called “vegetarians and vegans” without any great error.

Table 8. Characteristics of the types of Slovak consumers by food and beverages consumed ($n = 300$, in %).

Items	Answer	Consumer Type			
		I	II	III	IV
Milk and dairy products	Affirmative	-	83.7	60.6	93.3
	Neither yes nor no	12.5	5.8	20.2	2.2
	Negative	87.5	10.5	19.2	4.4
Bread and other cereal products	Affirmative	62.5	94.2	66.7	96.7
	Neither yes nor no	12.5	1.2	14.1	3.3
	Negative	25.0	4.7	19.2	-
Vegetables	Affirmative	100.0	82.6	85.9	97.8
	Neither yes nor no	-	12.8	7.1	1.1
	Negative	-	4.7	7.1	1.1
Fruits	Affirmative	100.0	87.2	85.9	96.7
	Neither yes nor no	-	8.1	5.1	3.3
	Negative	-	4.7	9.1	-
Meat and meat product	Affirmative	-	95.3	85.9	97.8
	Neither yes nor no	-	3.5	6.0	2.2
	Negative	100.0	1.2	8.1	-
Fish and fish products	Affirmative	25.0	27.9	39.4	91.1
	Neither yes nor no	12.5	26.7	15.2	6.7
	Negative	62.5	45.3	45.5	2.2
Seafood	Affirmative	-	3.5	8.1	42.2
	Neither yes nor no	-	3.5	10.1	14.4
	Negative	100.0	93.0	81.8	43.3
Sugar and sweets	Affirmative	25.0	80.2	47.5	67.8
	Neither yes nor no	25.0	11.6	21.2	12.2
	Negative	50.0	8.1	31.3	20.0
Eggs	Affirmative	25.0	90.7	75.8	100.0
	Neither yes nor no	25.0	5.8	17.2	-
	Negative	50.0	3.5	7.1	-
Legumin seeds	Affirmative	100.0	58.1	57.6	93.3
	Neither yes nor no	-	23.3	24.2	4.4
	Negative	-	18.6	18.2	2.2
Vegetable fats	Affirmative	75.0	60.5	45.4	87.8
	Neither yes nor no	-	24.4	19.2	10.0
	Negative	25.0	15.1	35.4	2.2
Animal fats	Affirmative	25.0	52.3	36.4	83.3
	Neither yes nor no	25.0	27.9	23.2	10.0
	Negative	50.0	19.8	40.4	6.7
Nuts	Affirmative	87.5	31.4	53.5	81.1
	Neither yes nor no	-	24.4	18.2	7.8
	Negative	12.5	44.2	28.3	11.1
Non-alcoholic beverages-unsweetened	Affirmative	37.5	82.6	77.8	92.2
	Neither yes nor no	37.5	9.3	9.1	4.4
	Negative	25.0	8.1	13.1	3.3
Sweetened non-alcoholic beverages	Affirmative	-	82.6	10.1	46.7
	Neither yes nor no	-	9.3	12.1	16.7
	Negative	100.0	8.1	77.8	36.7
Coffee	Affirmative	62.5	68.6	79.8	93.3
	Neither yes nor no	-	10.5	10.1	3.3
	Negative	37.5	20.9	10.1	3.3
Tea	Affirmative	87.5	70.9	78.8	92.2
	Neither yes nor no	-	14.0	10.1	3.3
	Negative	12.5	15.1	11.1	4.4

Note: as in Table 4. Source: own study.

Cluster I consumers, most often among the remaining respondents, declared that they pay attention to the price of purchased food (87.5%) and that their food needs were fully satisfied (100%). Furthermore, as much as 3/4 of the respondents in this group believed that their diet was healthy (Table 9).

Table 9. Slovak consumers' opinions on food and nutrition ($n = 300$, in %).

Items	Answer	Consumer Type			
		I	II	III	IV
My family eats healthy	Affirmative	75.0	59.4	63.3	76.7
	Neither yes nor no	-	20.9	18.4	8.9
	Negative	25.0	19.8	18.4	14.4
My family's food needs are fully met	Affirmative	100.0	84.9	91.8	96.6
	Neither yes nor no	-	7.0	4.1	-
	Negative	-	8.1	4.1	3.4
We seek dietary advice and recommendations when preparing meals	Affirmative	25.0	17.9	36.7	34.8
	Neither yes nor no	50.0	17.9	18.4	14.6
	Negative	25.0	64.3	44.9	50.6
We pay attention to food taste and smell when buying it	Affirmative	62.5	69.8	76.5	84.4
	Neither yes nor no	12.5	14.0	10.2	4.4
	Negative	25.0	16.3	13.3	11.1
We pay attention to food price when buying it	Affirmative	87.5	81.4	80.6	76.7
	Neither yes nor no	-	9.3	9.2	3.3
	Negative	12.5	9.3	10.2	20.0

Note: as in Table 4. Source: own study.

Vegetarian and vegan households are more often headed by housewives aged 36–49 than other types. They are most often households of three or five and more persons, living in cities with up to 50,000 population (Table 10).

Table 10. Characteristics of Slovak consumer households ($n = 300$, in %).

Item	Answer	Consumer Type			
		I	II	III	IV
Households by age of the housewife	Up to 35	14.3	26.8	30.8	23.3
	36–49	57.1	40.8	39.6	43.9
	50+	28.6	32.4	29.7	32.9
Households by number of persons	1	12.5	17.4	11.2	7.8
	2	12.5	20.9	24.5	32.2
	3	37.5	20.9	27.6	24.4
	4	25.0	31.4	27.6	26.7
	5	12.5	9.3	9.2	8.9
Households by subjective assessment of their own financial situation	Non-satisfactory	37.5	39.0	26.3	29.9
	Satisfactory	62.5	61.0	73.7	70.1
Households by place of residence	Rural area	-	22.1	14.3	21.1
	City up to 50 K	50.0	22.1	20.4	31.1
	City 51–100 K	12.5	32.6	26.5	23.3
	City 100+ K	37.5	23.3	38.8	24.4

Source: own study.

The second identified type of consumers is “sweet tooth”, consuming the most sugar and sweets (80.2%) and sweetened non-alcoholic beverages (82.6%) among the different types of consumers (Table 8). They constitute the least numerous (28.7%), after vegetarians and vegans, a separate group of consumers (Table 6). Despite the preference for products containing sugar, the diet of this type of consumer is also rich in fruits (87.2% declare that they eat a lot of them) and vegetables (82.6%). Almost everyone consumes large amounts of meat and meat products (95.3%), bread and grain products (94.2%), and eggs (90.7%). Seafood (3.5%), various types of fish (27.9%), and nuts (31.4%) are relatively the lowest in the diet of type II consumers (Table 8).

Cluster II consumers are aware that their diet is not the healthiest. Out of all four distinguished types, the “sweet tooth” group the least often agreed with the statement “My family eats healthy” (less than 60%). Furthermore, out of all distinguished clusters, type II

the least frequently admitted to seeking dietary advice and recommendations (less than 18%) (Table 8). Perhaps, or at least in part, such and not another diet results from their material status. Cluster II consumers most often of all respondents declared dissatisfaction with their current financial situation (Table 10) and emphasized that their food needs are not fully satisfied.

Moreover, over 80% of respondents in this group admitted that they pay attention to the price of food when shopping (Table 9).

The third type of Slovak consumers comprises 33.0% of all respondents (Table 7). This is the most numerous of the distinguished clusters. It could be described as “moderate diet supporters”. Analyzing the consumers making up this cluster, we can see similarities to “Polish” dieticians. Were it not for “vegetarians and vegans”, individuals from cluster III would declare the lowest consumption of the analyzed products in as many as 11 out of 17 analyzed food product categories compared to consumers from other clusters. These include milk and dairy products, bread and cereal products, fruits, meat and meat products, legume seeds, sugar and sweets, and both groups of fats and non-alcoholic beverages (Table 8). At the same time, these were the people who most often declared seeking dietary advice and recommendations among the respondents. Such a declaration was made by over 1/3 of respondents in this group (Table 9).

The respondents were forming cluster III more often than others represented households from cities with more than 100,000 inhabitants, managed by housewives aged up to 35. Consumers in this group, more often than in others, assessed their financial situation as satisfactory (73.7%) (Table 10).

Consumers gathered in the last, type IV could be described as “foodies.” That is, the same as in the case of type II of Polish consumers. They constitute the second largest group of Slovak consumers (30.3% of the total number of respondents) (Table 6). Consumers from this cluster most often declared consuming large amounts of the products in question, namely as many as 11 out of 17 examined product groups. On the one hand, they were fish, seafood, and dairy products recommended by WHO, and on the other—less recommended meat, meat products, and animal fats.

Moreover, cluster IV consumers, among the discussed types, most often declared consuming large amounts of unsweetened non-alcoholic beverages, as well as coffee and tea. Slovak “foodies” did not have an aversion to legume seeds—the least accepted by “foodies” from Poland. Consumption of large amounts of these seeds was declared by over 90% of cluster IV consumers (Table 8).

Referring to this group of consumers as foodies, just like in the case of Polish consumers, also results from the behavior they declare when shopping for food. The price is important to them, but it is not the most important thing. Most often, among the discussed types of consumers, they agreed with the statement: “We pay attention to food taste and smell when buying it” (over 84%), and least often—“We pay attention to food price when buying it” (76.7%) (Table 9). Type IV households are most often run by women aged 36–49. They consist of two persons and are located in cities with up to 50,000 population. These households are in a relatively good financial situation. Over 70% of households representing this type declared satisfaction in this respect (Table 10).

5. Discussion

Shopper-oriented marketing refers to “the planning and execution of all marketing activities that influence a shopper along, and beyond, the entire path-to-purchase, from the point at which the motivation to shop first emerges through to purchase, consumption, repurchase, and recommendation” [12,21]. The theoretical contribution that emerged from this work is in the indicated difference between Poles and Slovakian consumer behavior, which characterizes common changes in preferences to natural products in order to maintain their health. It means Poles are for health food of consumption and Slovaks are interested in healthier consumption style like “vegetarians and vegans”. This trend is already evident in the European Union.

Although many studies have investigated the effect of perceived shopping value on both overall satisfaction and behavioral intention [39–42]. There is a need to investigate this field because, in the process of shopping, consumers are assumed to form perceptions about different shopping attributes that may individually and significantly affect the overall value of a shopping trip [23,24]. This means that consumption overreaches its economic function. The main indicator of consumer shopping behavior abroad is the search for value, which manifests itself in consumer satisfaction.

Furthermore, in accordance with literature about parenthood and the motivation of adults regarding food choice, there is a direct influence of behavior within the family [43]. According to the above-mentioned results in both countries, it is clear that from the point of view of consumer behavior the relatively worst attitudes were found in multigenerational households in which grandmothers had the decisive influence on the quantity of food purchased and especially the preparation of food [44].

The relevant practical contribution of the present work is that to identify and describe the different types of food consumers based on detailed behavioral patterns may take into consideration the intention to consume healthy foods as the only significant predictor. For example, Nystrand and Olsen [7] emphasize the importance of nutrition and health awareness and information; cognitive and sufficient antecedents such as attitudes, perceptions, and beliefs; product properties; and sociodemographic variables and consumer choice regarding organic foods.

Another relevant contribution of the present work is that it provided a detailed exploration of consumers' associations with food products, providing valuable information to design communication campaigns for food manufacturers and retailers aimed at reducing food waste. It emerged clearly that Poles and Slovaks pay attention to food taste and smell when buying it. It is essential to make consumers aware that they are acting in their interests. By wasting less food, they will safeguard their health and their finances. What the food industry also influences is the correct portioning of products. Some of them can quickly be sold in unit packages holding a large mass of product when opening such a package, and using it for a more extended period does not significantly affect the quality and attractiveness of consuming the product. By contrast, some foods may be more attractive to consumers if they are supplied in smaller individual portions suitable for immediate consumption once opened. This may apply to perishable products and those that dry out or change color after opening. This approach is particularly important in relation to consumers, who pay attention primarily to taste and smell when choosing food [45]. However, it is essential to remember that consumers change their habits and are subject to fashions and trends. The food industry should therefore adapt its offer to consumer expectations.

It is also important to mention that all EU Member States have to run awareness campaigns on food waste prevention with the revision of EU legislation on food waste [46]. Therefore, the EU Platform on Food Loss and Wastage was established in 2016, bringing together EU institutions, experts from EU countries and relevant stakeholders selected through an open call for proposals. Among other things, the Platform aims to support all actors in identifying the actions needed to prevent food waste [47].

6. Conclusions

Since consumers are highly diversified, the emphasis lies on typologization and segmentation when evaluating offerings. Therefore, choosing the target customer is the basis of the distribution channel creation for the manufacturer as well as for the retailer. Consumers' attitudes and emotional associations varied with the type of segment and food category in this comparing of Poles and Slovaks. This paper provides an example of the application of multi-attribute decision-making method in the context of an analysis of customers' preferences in the food market. In conclusion, it should be emphasized that Poles and Slovaks similar are in considering buying food from a health perspective. The Polish consumers were dominated by the type of "health food enthusiasts" while the

Slovak consumers were “vegetarians and vegans”. It is important to raise awareness that some negative effects on attitudes and emotional reactions to reducing food waste in the store have been noted, as Polish and Slovak consumers pay attention to the taste and smell of food in their minds when shopping. As a result, the model of typology for two different markets makes a contribution to the literature by performing an in-depth exploration of consumer attitudes toward food and non-alcoholic beverages.

This results in the expectations from given offerings make the consumers the judges of the success or failure of the store but also of the whole distribution channel. Therefore, the following research should deal with suboptimal food that can be made more valuable for consumers through working with marketing communication on budget savings and with pricing tactics, whereas a significant consumers’ group represented non-satisfactory in their families in each nation.

Undoubtedly, further in-depth analyses are needed, in the particular extension of the survey to other Polish provinces and other countries. It would be worth spreading the scope of the research to the impact of the COVID-19 pandemic on consumer behavior. This is one of the key focus these days. Some exciting publications are already appearing on this issue [48].

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