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Attitudes of the Lifestyle of Health and Sustainability Segment in Hungary

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Abstract: The aim of the research was to define the size of the Hungarian LOHAS (Lifestyle of Health and Sustainability) consumer group by analyzing its lifestyle based on sustainable values. To achieve this goal, a representative questionnaire-based survey was carried out involving 1000 individuals in Hungary. During the value-orientated research, 25 lifestyle statements were drawn up. According to the results, five value-based segments could be distinguished. The largest cluster, the young trend followers group, reflects the characteristics of the LOHAS consumers' lifestyle to the greatest extent. However, this segment cannot entirely be regarded as a consumer group devoted to LOHAS values, which is why a further segmentation of this group was necessary. As a result of this further segmentation, the third sub-cluster, which emphasizes the ethical (competence) statements the most, can be identified with the LOHAS consumer group, which makes up 8.7% of the Hungarian population. Further research is necessary to find out whether the situation regarding value orientation in Hungary is similar to that in other Eastern European countries whose social and cultural backgrounds are very similar. Revealing the values of the Lifestyle of Health and Sustainability segment contributes to the extension of the literature.

Keywords: lifestyle; health; sustainability; attitudes; segmentation

1. Introduction

After realizing the limited resources and the environmental challenges that we face at the beginning of the 21st century, marketing experts are today interested in global issues such as sustainable development and sustainable consumption [1–3]. Sustainable consumption can become a reality if consumers are highly committed to, and conscious of, their own, self-chosen values, and if their consumption motivations follow these values in real shopping situations. This "new type" of consumer behavior can be regarded as "sustainable consumption", and its most committed consumers are referred to as LOHAS (Lifestyle of Health and Sustainability) by the literature [4–6].

Over the past few decades a number of research studies have focused on a market segmentation based on human values. A common assumption of these investigations was that values are closely related to behavior, often more closely than to personality traits. At the same time, values are less numerous and more centralized, and are connected to motivation more directly than attitudes [7,8]. A review of the literature shows the following measurement tools have been used to investigate this subject: the Rokeach value system (RVS) [9]; the values and lifestyles system (VALS) [10]; the list of

values (LOV) [11] and Schwartz's human values [12]. Due to its simplicity and widespread utility in marketing research, Kahle's List of Values [11] is the most widespread.

In 2002, the Natural Marketing Institute, with the help of a new segmentation model and within the framework of a quantitative consumer survey, divided the market for environmental friendly products into different segments on the basis of consumer attitudes towards the environment, ethical consumption and sustainability, as well as on how these attitudes influence consumer behavior. According to the results of the research, the following five segments can be identified: LOHAS (Lifestyle of Health and Sustainability), Naturalists, Drifters, Conventionalists and the Unconcerned. According to this segmentation model, the elements that most determine the LOHAS consumer group's attitudes are the environment, society and socially responsible business. The early followers are able to influence their family and friends; furthermore, they are less price-sensitive and are typically brand loyal. In short, their social role and inner values constitute the basis that makes them the target of many marketing activities [13,14].

The demographic composition of LOHAS consumers, based on the results of the Natural Marketing Institute (NMI), can be described as follows: a typical LOHAS consumer is a married, middle-aged woman and, in most cases, she has no children. LOHAS consumers generally have a high salary and a university degree [14]. Moreover, a young LOHAS group has also appeared recently. This group includes members of the millennium generation for whom environmental concerns are especially important [15,16]. They can be seen as an introductory stage towards the LOHAS lifestyle, and they are called the "Ecos" and "Alternatives". In this sense a healthy lifestyle is not a defining element of their values. "Ecos" focus on ecological sustainability and often animal rights, while "Alternatives" concentrate on economic justice and are against the economic primacy of globalization [17].

However, the LOHAS lifestyle is difficult to describe purely on the basis of demographic characteristics, such as gender, age, qualifications and income. Since the choice of values and value orientation help us when making different decisions, and are characteristic of a person or a consumer group, they have an outstanding role in consumer behavior-research [18,19]. Longer periods of time are characterized by the nature of their value orientation [20]. Today we have reached another turning point in values, namely an appreciation of human values. This period of value orientation is characterized by an avoidance of overconsumption, a desire to look after our environment, to protect our health and to seek the natural and authentic elements in our lives [19,21,22]. Buerke et al's [23] results indicate that both consumer awareness and sustainability-focused value orientation have a direct positive influence on responsible consumer behavior.

Over the past few decades, several studies have analyzed the connection between values and lifestyle. The most important of these have revealed the connections between human values and the lifestyle of food-consumers [24–26]. The impact of values on health behavior, which is strongly influenced by lifestyle, has also been analyzed by several researchers. Grube et al. [27] examined the connection between value order and smoking, while Toler [28] examined the link between personal values and alcoholism.

Value order is of particular interest, both in analyzing the consumer behavior of LOHAS individuals and in estimating their proportion among the population as a whole. LOHAS consumers—as can be seen from the acronym itself—live their lives consciously [29], but they also feel responsible for others. Their commitment to sustainability manifests itself in purchases of environmental friendly and socially responsible products. In the world of LOHAS, sustainability is identified with the quest for individual health, spiritual wellbeing and a "more natural lifestyle" [30,31]. According to the results of a study conducted by the Natural Marketing Institute, at least twice as many LOHAS consumers buy foods in environmental friendly packaging than individuals in other consumer segments [14]. According to researches LOHAS consumers regularly purchase organic products [32–34]. Fares and Zhang's [33] and Bonn et al's [35] analysis indicated that the attributes of a certified product would be more important for the LOHAS consumer. In addition to environmental aspects, the values of social responsibility can also be found in the decisions made by LOHAS consumers [14,36,37].

These include, among others, their attitudes towards fair trade, ethical behavior and social justice. A search for individual values, e.g., wellness, enjoyment, comfort and personal improvement is also characteristic of this group [29,38]. According to Ramirez [22], ethical and individual values are also very important from the perspective of sustainable consumption.

On the whole, it can be said that the LOHAS lifestyle has five well-defined value categories that drive individuals' behavior [39–41]. These are authentic values, health consciousness, ethical values, individualism and environmental consciousness. Authentic values appear in the search for local and domestic products, while health consciousness is manifested in a healthy lifestyle, and ethical values are connected to the various forms of social responsibility. Individualism is expressed in the search for new products, in following new trends and in loyalty to brands. Environmental consciousness is manifest in a sustainable lifestyle, which includes a commitment to environmental protection. According to Park [42], the LOHAS tendency has a positive effect on health consciousness and on life-satisfaction.

The research of the German Zukunftsinstitute (Institute of the Future) draws attention to another important feature of this group, namely that members of the LOHAS group are characterized by a hybrid lifestyle in which different characteristics—such as health, the search for experiences, and individualism—are unified with each other [6,19,40,43].

This contradictory lifestyle has resulted in much criticism of the LOHAS group, since it is viewed as a sustainable lifestyle that, however, is restricted to the wealthy section of society. Sustainable living should not be limited to those with sufficient financial means. One of the main criticisms of LOHAS is the exclusion of considerations of sufficiency. LOHAS individuals put great emphasis on the overuse of resources in general, but food waste and under-nutrition is ignored. The question arises as to whether global resources can meet the demands of a growing number of LOHAS consumers. An alternative to LOHAS is seen in LOVOS (Lifestyle of Voluntary Simplicity), a lifestyle of voluntary simplicity that includes a stronger renunciation of consumption. 'Less is more' is a statement that LOHAS individuals would certainly not agree with [5]. The LOHAS group has created a new market segment based on sustainability and could be held responsible for driving production beyond a necessary level and therefore undermining the effects of making markets more sustainable [44]. Aesthetics and lifestyle are just as important to them as are aspects of sustainability [45], and indeed LOHAS individuals can even contribute to an overall loss of sustainability [46]. Attempts to promote only (free market) strategies that foster the establishment of a solid LOHAS group without giving other incentives for companies to produce in a more sustainable way can therefore be viewed in a critical light.

The LOHAS consumer group consists of about 100 million consumers around the world and in Europe it makes up approximately 20% of the population. LOHAS is a trend that is present mostly in the western world, but is also widespread among consumers in Asia [40]. In the developed countries, the proportion of consumers who make their shopping decisions considering aspects of ethical and environmental protection can even approach 25%. Current market research promises an increasing significance for LOHAS, which represents a multi-billion marketplace. Globally, LOHAS is an annual 500 billion US dollar market [47]. According to another estimate, LOHAS is a 355 billion dollar market in the United States alone and a 546 billion US dollar market worldwide [48]. In the USA, the size of this group is estimated by Schulz at 40 million [6], which is 13–19% of the whole US population. According to the estimates of Cohen [1] and Ramirez [22], 30% of the adult population (90 million people) belongs to this segment in the USA. According to Schulz [6], in Europe the number of LOHAS consumers is over 130 million, which is 18% of the population.

LOHAS is also spreading fast in Japan. According to a survey by the Japanese E-Square Inc. carried out in 2005, the LOHAS lifestyle is characteristic of almost one-third (29%) of the adult Japanese population [49]. In New Zealand, almost 33% of the population belongs to this category [47]. In Australia, the LOHAS market includes almost 4 million people, about one-fourth of the adult population, and they spend 12 billion Australian dollars annually [47,50]. Since 2005, the LOHAS lifestyle has become widespread in China as well, and it matches the philosophy of Chinese

culture in terms of Chinese people's conception of health (healthy life), emotional well-being and sustainability [51].

The new era of value orientation occurred earlier in Western than in Eastern European countries, but today the way of thinking and the values which characterize the lifestyle of LOHAS consumers have also appeared in Hungary, as is proven by the results of Hungarian research [19,52]. The role and weight of research within the national economy is indicated by the fact that detailed reporting of the annual costs of research and experimental development is not only required in the supplementary appendices of annual financial statements, but the areas of research and development, and achieved and expected results also need to be covered in the business report [53].

The first aim of present study was to examine which of the different factors present in the literature determine the LOHAS lifestyle. The second aim was to specify the size of the LOHAS consumer group by analyzing the sustainable value-based lifestyle. The third aim was a methodical development: the multidimensional approach is the kind of sophisticated method which can be applied in the other Eastern European countries whose social and cultural backgrounds are very similar. Consequently, this method provides a means to compare the results with each other.

2. Materials and Methods

2.1. The Background of Value-Based Lifestyle Segmentation

Unlike the segmentation model of the Natural Marketing Institute [14], we defined the size of the Hungarian LOHAS consumer group by using a value-orientated lifestyle analysis. The list of the statements used in our research was developed by Lehota et al. using a document-analysis method [52]. The documents were evaluated according to the following categories: health consciousness, environmental consciousness, ethical values, authentic values and individualism [52]. The literature review also highlighted the fact that these values describe the LOHAS lifestyle the best. Based on the results of the content analysis, a list of statements was made which included 50 items, of which 21 were analyzed later. This reduction in the number of items was necessary because of the CATPCA analysis, which was able to reveal the structure behind the items.

2.2. Sampling

In order to achieve the objective we had set ourselves, a nationwide representative questionnaire-based survey was carried out in Hungary in 2014, involving 1000 people. Representativeness for regions and types of settlement was ensured by the quota sampling method. The sample pattern conformed to the quotas previously defined by the Hungarian Central Statistical Office (HCSO). In the assigned settlements, a random walking method was used to ensure total randomness in selection. In the second stage, within one household, the respondent was selected by use of the so-called birthday-key method. With this method, randomness was ensured in the second stage, as well. The refusal rate was 30%; the questions were answered in 70% of all households surveyed.

Finally, the sample was corrected using multi-dimensional weighting factors (gender and age). The application of these methods ensured that the sample was representative of the structure of the Hungarian population in four aspects (region, type of settlement, gender and age).

2.3. Questionnaire

During the value-orientated research, 21 lifestyle statements were drawn up and were grouped according to the following 5 aspects [41]: environmental consciousness, health consciousness, ethical values, authentic values and individualism. Following this, the respondents were asked to evaluate the statements on a Likert type scale (1 = do not agree at all; 5 = totally agree). The average response rate to statements was 98.7%. At the end of the questionnaire, the socio-demographic background variables were investigated in terms of gender, age, education level, subjective income status (i.e., how subjects

feel about their income status compared to the average income level) and the types of settlement they live in. The division of the sample according to socio-demographic variables is shown in Table 1.

Table 1. The socio-demographic background of the sample.

Criterion	Division of The Sample	
	N	%
Total number of respondents		
Total	1000	100.0
Gender		
Men	490	49.0
Women	510	51.0
Age		
18–29 years	258	25.8
30–39 years	181	18.1
40–49 years	207	20.7
50–59 years	162	16.2
Over 60 years	192	19.2
Education		
Elementary school	116	11.6
Vocational school	318	31.8
High school qualification	395	39.5
University degree	171	17.1
Subjective income		
Have regular financial problems	21	2.1
Sometimes cannot make ends meet	135	13.5
Just enough to live on, but cannot save	503	50.3
Can live on it, but can save little	283	28.3
Can live on it very well and can also save	36	3.6
No answer	22	2.2
Settlement		
Capital city	188	18.8
County town	221	22.1
Town with more than 10,000 residents	179	17.9
Town with between 2000 and 10,000 residents	236	23.6
Settlement with less than 2000 residents	176	17.6

2.4. Statistical Analysis

Many multivariable statistical methods (CATPCA, Cluster analysis), which are appropriate for determining different segments, were applied [54].

Firstly, the appearance of sustainable values in Hungary was tested using CATPCA during which Cronbach's Alpha was calculated to test the reliability of the dimensions identified. Standard models for categorical data analysis often perform poorly, especially when there are few observations or too many variables. CATPCA can offer an appropriate solution for these problems. CATPCA rescales the categorized data to a numerical variable applying the Optimal Scaling method, and then performs a reduction on the number of variables in the data similarly to standard PCA. Optimal Scaling assigns numerical values for each category. These optimally scaled values can be used during PCA assessment as metric characteristics are provided for the given variable. The values are assigned to the categories during an iterative method called Alternating Least Squares (ALS). CATPCA requires the number of observations to be 10 times more than the number of variables. Our sample contained 1000 valid observations, which is more than enough for the analysis, which was performed using SPSS 23.0 software. CATPCA was applied in order to reveal the underlying dimensions of measures on a Likert scale. The identified dimensions have a reliability above the recommended 0.7 and all the factor loadings were greater than 0.5.

After the CATPCA analysis, a value-based lifestyle segmentation of Hungarian consumers was made using cluster analysis. Clustering quality indices were used to determine the proper clustering algorithm and to establish the suitable number of clusters. The following clustering methods were compared: hierarchical clustering with Euclidean distance (using simple, complete and average linkage, centroid, median and Ward's method) and K-means clustering (using MacQueen's method). We performed the abovementioned clustering algorithms with different numbers of clusters (3–6). The following widely used quality indices were applied: the Silhouette index, the Calinski-Harabasz index and the Dunn index.

Clusters were characterized according to socio-demographic characteristics with cross tabulation analysis, and according to lifestyle with Welch's variance analysis (Welch's F values were taken into account to measure the clustering power of the selected items because of the heterogeneity of the clusters).

3. Results

3.1. Results of Factor Analysis

The structure of the sustainable value-based lifestyle in Hungary was established through the use of CATPCA. Table 2 shows the six components of the sustainable value-based lifestyle.

The first component includes individualist values (explained variance: 20.5%). Here we included factors such as fashion, brand, style, preference for unique products, and the approach to quality and personality as a value. It means that in the Hungarian consumers' way of thinking quality is closely connected to brand and image, and that the style and the design of products often reflect their personality. The high component loadings refer to the way in which the value dimension shapes the value order of Hungarian consumers to a great extent, and is strongly separated from the others.

The second component shows authentic values, where the explained variance is 13.0%. National engagement, the existence of local values and respect for traditions are of great importance. In this way of thinking supporting Hungarian producers and contributing to the country's economic development are combined, and here trademarks play an important role.

The third component includes factors belonging to the environmental consciousness value (explained variance: 11.7%). The components of this attitude are "using recyclable packing", "making energy savings", and "educating children to be environmentally conscious".

The fourth component includes ethical factors that fall within the consumers' own field of competence (explained variance: 9.1%). Such characteristics include supporting the activity of civic organizations with donations and voluntary work.

The fifth factor includes elements of health consciousness (explained variance: 8.2%). In the attitudes of the Hungarian population health consciousness is connected to their preference for seasonal products and food products contributing to a healthy lifestyle, and to the careful planning of meals and physical activity in a comprehensive way.

The final component consists of two ethical values that refer to judgments of corporate behavior (explained variance: 7.5%). It involves providing proper working conditions and the company's charitable activities, which coexist in consumers' attitudes.

Principal Component Analysis clearly separated the questions related to each value dimension. However, there were some overlaps that should be noted. For example "I prefer foods that contribute to staying healthy" belongs to Healthy and also to Environmental consciousness, and "I consider a company that donates to charities is a better company" also belongs to the authentic value dimension. Furthermore, "Sport is essential to staying healthy" belongs to Health consciousness and ethical (corporate) values, too. All questions contributed to the explained variance to a great extent, especially those which have higher explained variance, such as better working conditions, buying seasonal and Hungarian products, preferring branded products and charity work (Table 2).

Table 2. Components of LOHAS consumer's lifestyle.

Statements	Individualist Values	Authentic Values	Environ-Mental Consciousness	Ethical (Competence) Values	Health Conscious-Ness	Ethical (Corporate) Values	Variance Accounted for (%)
I prefer branded products.	0.830						73.3
I prefer uniquely designed products.	0.846						72.0
Style is important to me.	0.827						70.8
I buy products that reflect my personality.	0.839						71.6
I live considering the latest fashion.	0.799						67.5
I prefer high quality products.	0.798						68.1
I contribute to the economic development of the country by buying Hungarian products.		0.804					71.8
Respect for traditions is important to me.		0.754					61.5
Trademarks on products (e.g., for a Hungarian product) reduce uncertainty during shopping.		0.728					61.1
If I purchase food at the local markets, then I support Hungarian producers.		0.733					61.0
It is important that the packing of the product should be recyclable.			0.792				70.4
Energy saving household gadgets contribute to sustainable development.			0.782				70.6
Children should be educated to be environmentally conscious.			0.760				67.5
I regularly support the work of charity organizations with donations.				0.897			60.5
I do charity work annually.				0.884			82.4
I usually buy seasonal products (e.g., watermelons in August).					0.824		82.6
When I plan my daily meals I am careful that my body should get all the necessary nutrients.					0.614		70.2
I prefer foods that contribute to staying healthy.			0.500		0.500		66.2
Sport is essential to staying healthy.					0.543	0.417	60.4
I consider a company that provides good working conditions for its employees is a better company.						0.844	81.7
I consider a company that donates to charities is a better company.			0.309			0.694	74.9

Method: Categorical Principal Component Analysis; Normalization Method: Variable Principal; Total Variance Explained: 70%; N = 1000.

Table 3 presents the Cronbach's Alpha score and the extracted variance of the identified components of CATPCA. The results support the belief that the identified dimensions are reliable and the explained total variance (70%) is sufficiently large.

Table 3. Validation and explained variance of the components describing the LOHAS consumer's lifestyle.

Value Dimension	Cronbach's Alpha	Variance Accounted for (%)
Individualism	0.906	20.5
Authentic	0.811	13.0
Environmental consciousness	0.762	11.7
Ethical (competence)	0.730	9.1
Health consciousness	0.723	8.2
Ethical (corporate)	0.713	7.5
Total	0.978	70.0

3.2. Results of Segmentation

CATPCA analysis demonstrated that the components obtained are suitable for cluster analysis; therefore, in the next stage we performed a value-based lifestyle segmentation of Hungarian consumers using the CATPCA components obtained.

Based on the applied quality indices (Silhouette, Calinski-Harabasz, Dunn), K-means clustering with 5 clusters proved to be the appropriate configuration. The characteristics of the lifestyle groups based on the 21 factors are shown in Table 4.

3.2.1. Detailed Description of Value-Based Lifestyle Clusters

In accordance with the aims of the research, each cluster is characterized in detail. Before outlining the lifestyle characteristics of each group, it is useful to pay attention to the Welch's F values in Table 4. Each consumer group is separated mainly on the basis of individualism and environmental consciousness. On the other hand, energy saving, recyclable packing, sustainable development, the intake of all necessary nutrients, and supporting Hungarian producers are of major importance in discriminating the clusters.

Cluster 1—Young Trend Followers

The proportion of this group within the entire population is 32.1%, i.e., this is the largest cluster, made up of 321 people. Women are slightly overrepresented in this segment (33.5%), as are youngsters, and the proportion of people over 60 is low (22.9%). In this segment, people with a university degree (47.4%) and with a high school education (38.7%) are strongly overrepresented, but people with an elementary school (20.7%) or a vocational school education (19.8%) are underrepresented. The group is dominated by households with high income status, and the proportion of people with financial problems is very low. This cluster is characteristically made up of urban residents, most of whom live in towns with over 10,000 people (39.9%), or in county towns (32.1%).

The group gave a positive answer to most of the statements. Considering the five value groups, they perform well on the individualist value dimension, and rank first as regards all CATPCA components. Health is especially important to them; they eat consciously, do sports relatively regularly and, compared to the other groups, they emphasize these components. Compared to cluster 2, they do not emphasize ethical (competence) values and their judgment of ethical corporate behavior is the same as that of clusters 2 and 3. Authentic values appear in their lifestyle, but their judgment is not significantly different from cluster 2.

Table 4. Consumer clusters based on sustainable values.

Statements	Characteristics of the Sample		Characteristics of Consumer Segments				
	Welch's F	**Sample Mean**	**Cluster 1**	**Cluster 2**	**Cluster 3**	**Cluster 4**	**Cluster 5**
It is important that the packing of the product should be recyclable.	132.821	3.95	4.31	4.34	4.44	2.84	2.83
Energy saving household gadgets contribute to sustainable development.	164.196	4.34	4.69	4.65	4.60	3.46	3.52
Children should be educated to be environmentally conscious.	191.291	4.60	4.83	4.89	4.90	3.88	3.83
I prefer foods that contribute to staying healthy.	111.822	4.18	4.71	4.49	3.94	3.42	3.46
When I plan my daily meals I am careful that my body should get all the necessary nutrients.	131.041	3.70	4.44	4.06	3.03	3.03	2.90
Sport is essential to staying healthy.	76.388	4.12	4.61	4.32	4.07	3.27	3.55
I usually buy seasonal products (e.g., watermelons in August).	96.836	4.22	4.69	4.57	3.35	4.07	3.73
I regularly support the work of charity organizations with donations.	17.133	2.27	2.47	2.70	1.77	1.93	2.15
I do charity work annually.	11.947	2.05	2.07	2.54	1.68	1.83	1.94
I consider a company that donates to charities is a better company.	38.013	3.59	3.83	3.84	3.81	3.25	2.38
I consider a company that provides good working conditions for its employees is a better company.	38.936	4.04	4.23	4.23	4.42	3.58	3.05
If I purchase food at the local markets, then I support Hungarian producers.	134.484	4.09	4.36	4.32	4.30	4.15	2.29
Respect for traditions is important to me.	72.035	4.07	4.27	4.39	3.94	4.15	2.79
I contribute to the economic development of the country by buying Hungarian products.	131.635	4.16	4.43	4.42	4.32	4.15	2.49
Trademarks on the products (e.g., for a Hungarian product) reduce uncertainty during shopping.	80.241	3.87	4.23	4.12	3.80	3.80	2.44
I prefer branded products.	101.097	2.84	3.68	1.93	2.87	2.54	2.62
I prefer uniquely designed products.	105.723	2.88	3.70	1.91	2.97	2.54	2.82
Style is important to me.	118.543	3.22	4.08	2.25	3.52	2.73	2.95
I live considering the latest fashion.	109.745	2.43	3.34	2.56	2.25	2.06	2.42
I buy products that reflect my personality.	103.037	3.05	3.94	2.21	3.04	2.63	2.84
I prefer high quality products.	92.472	3.15	4.02	2.40	3.01	2.86	2.84

1–5 Likert scale (1 = does not agree at all, 5 = totally agrees); Clustering method = K-means Cluster; N = 1000.

Cluster 2—Ethical Traditionalists

This cluster forms the second biggest group within the sample (22.6%, 226 people). Within the cluster, women are slightly overrepresented (23.9%), and in terms of age, people over 40 dominate the cluster. This segment is overrepresented among people educated up to elementary school level (30.2%) and those with a vocational school qualification (25.8%), and the proportion of people with a high school education and a university degree is low compared to the weight of the group (20.8% and 15.8%). This cluster is characterized by a relatively balanced financial status, and is dominated by people on an average or slightly lower than average incomes. They characteristically live in smaller settlements or in the capital.

This cluster takes the leading position in the judgment of ethical (competence) values. The members of this segment are more willing to donate to voluntary citizens' groups and they do voluntary work more frequently than the others. Compared to clusters 4 and 5, their environmental and health consciousness is greater. This segment consists of devoted traditionalists, a feature which is probably connected to their age and ethical behavior.

Cluster 3—Young Environmentally Conscious People

Based on its size, this is the third biggest cluster of the five (18.6%, 186 people). In terms of gender, men dominate (21.0%) the group. Age groups between 18 and 29 (23.6%) and between 30 and 39 (23.8%) are overrepresented. The other age groups are less significant. People with a high school level education (19.2%) and a university degree (20.5%) are slightly overrepresented, but to a smaller extent than in cluster 1. In terms of income, this group is bipolar: on the one hand, people with a slightly worse than average financial status dominate; on the other hand, the group also includes the wealthiest. This bipolarity also appears in terms of place of residence, in that people living in the capital city (20.7%) and people living in a county town (21.7%) are overrepresented, and at the same time the proportion of people living in a village with less than 2000 people is also high.

This segment appreciates the recyclable packing of products most, and their level of agreement with the statement that "children need environmentally conscious education" is the highest. Health consciousness is less characteristic of this group. Regarding individualism, this cluster ranks second after cluster 1.

Cluster 4—Uninvolved Elderly People

This group makes up 16.4% (164 people) of the respondents. In this segment men are slightly overrepresented (16.7%) and elderly people predominate, while youngsters between the ages of 18 and 29 are strongly underrepresented (10.1%). In this group, the proportion of people with an elementary school education (19.8%) and that of skilled workers (24.2%) is high; however, the proportion of people with a university degree (10.5%) is low. This segment is dominated by people with a difficult financial situation, while households with a higher income status are underrepresented. They characteristically live in towns with more than 10,000 people (22.3%), while people living in the capital city are underrepresented (12.8%). Their commitment to a sustainable lifestyle is low, they do not emphasize the 21 lifestyle variables—apart from a few exceptions—and they are the closest to consumer cluster 5.

When compared to the means of clusters 1, 2 and 3 they differ particularly in environmental consciousness, but their way of thinking about this dimension is similar to that of cluster 5. Compared to the mean of the entire population, they emphasize traditions and food purchases at local markets, through which they wish to support the local economy. They place significantly less emphasis on individualism; their opinion on this subject is also close to that of cluster 5.

Cluster 5—Disappointed Pessimists

This cluster includes 10.3% of the respondents, 103 people altogether. In terms of gender, the composition of this segment is well balanced; people between the ages of 18 and 29 dominate (12.0%), but people over 50 are underrepresented. This cluster characteristically includes people with an elementary school (13.8%) or vocational school education (12.3%), but people with a university degree are strongly underrepresented (5.8%). In this segment many people have financial problems (33.3%) and only a very small proportion of them can save. The greatest proportion of the group lives in settlements with between 2 and 10 thousand inhabitants (27%).

They do not emphasize any of the statements as much as those in the other clusters. They do not emphasize values connected to environmental and health consciousness, and are the least positive of all the segments about ethical corporate behavior and authentic values. Their opinion about individualism is similar to clusters 3 and 4.

The Rate of LOHAS Consumers within the Group of Young Trend Followers

In the course of our analysis it became obvious that the young trend followers segment cannot be fully regarded as a consumer group devoted to the values of LOHAS. Hence, it is useful to continue with a more detailed analysis of this cluster. Using K-means with 4 subgroups turned out to be the best method to employ during the clustering as regards the applied cluster quality indices.

Compared to the other groups, it is Sub-cluster 3 that places a significant emphasis on ethical (competence) statements, and it also performs well in the individualist value dimension (Table 5).

Table 5. Consumer clusters based on sustainable values within the group of young trend followers.

Statements	Characteristics of the Sample		Characteristics of Consumer Segments			
	Welch's F	Sample Mean	Sub-Cluster 1 N = 113 (35.2%)	LOHAS N = 87 (27.1%)	Sub-Cluster 3 N = 75 (23.4%)	Sub-Cluster 4 N = 46 (14.3%)
It is important that the packing of the product should be recyclable.	11.714	4.31	3.94	4.57	4.53	4.37
Energy saving household gadgets contribute to sustainable development.	0.942	4.69	4.65	4.66	4.77	4.67
Children should be educated environmental-consciously.	3.574	4.83	4.81	4.74	4.89	4.93
I prefer foods that contribute to staying healthy.	3.243	4.71	4.79	4.59	4.77	4.67
When I plan my daily meals I am careful that my body should get all the necessary nutrients.	2.910	4.44	4.38	4.52	4.57	4.22
Sport is essential to stay healthy.	8.695	4.61	4.66	4.48	4.87	4.30
I usually buy seasonal products (e.g., watermelon in August).	2.616	4.69	4.73	4.59	4.80	4.63
I regularly support the work of charity organizations with donations.	156.607	2.47	1.91	4.22	1.88	1.48
I do charity work annually.	152.159	2.07	1.45	3.82	1.48	1.22
I consider the company that donates to charities is a better company.	83.920	3.83	4.19	4.47	3.64	2.07
I consider the company that provides good working conditions for its employees is a better company.	74.416	4.23	4.65	4.51	4.19	2.72
If I purchase food on the local markets, then I support Hungarian producers.	12.828	4.36	4.58	4.39	3.91	4.50
Respect for traditions is important to me.	26.026	4.27	4.56	4.51	3.68	4.11
I contribute to the economic development of the country by buying Hungarian products.	29.535	4.43	4.72	4.48	3.85	4.54
Trademarks on the products (e.g., for a Hungarian product) reduce uncertainty during shopping.	23.809	4.23	4.38	4.47	3.61	4.41
I prefer branded products.	10.744	3.68	3.66	4.09	3.37	3.46
I prefer uniquely designed products.	4.645	3.70	3.67	3.98	3.53	3.50
Style is important to me.	3.377	4.08	4.09	4.28	3.89	4.00
I live considering the latest fashion.	5.881	3.34	3.15	3.70	3.19	3.35
I buy products that reflect my personality.	3.007	3.94	3.97	4.09	3.85	3.70
I prefer high quality products.	8.172	4.02	4.21	4.14	3.83	3.65

1–5 Likert scale (1 = does not agree at all, 5 = totally agrees); Clustering method = K-means Cluster; N = 321.

4. Discussion

The aim of the research was to specify the size of the LOHAS consumer group by analyzing the sustainable value-based lifestyle. The results revealed that in the value order of Hungarian consumers, characteristics pointing in the direction of sustainability are present, and they are divided into six value categories. These are individualist values, authentic values, environmental consciousness, ethical (competence) values, health consciousness and ethical (corporate) values. Of these value dimensions, authentic values, health and environmental consciousness, and ethical corporate behavior are especially important to Hungarian consumers. According to the research results of Lehota et al. [52]—which were carried out among Hungarian consumers—values expressing a hybrid lifestyle appear in a similar system, but the difference is that in their case, health and environmental consciousness form one combined factor.

In international practice, the segmentation method of the Natural Marketing Institute (NMI) is the most widely used approach. This method estimates the size of the LOHAS segment [14] based on consumers' attitudes regarding environmental and social issues, as well as their expectations towards sustainable company operations in terms of environmental protection. The different segmentation techniques do not allow for an appropriate comparison of Hungarian and foreign research results, i.e., it is impossible to draw parallels between the value-based groups introduced and the segments identified using the segmentation model of the NMI—Naturalists, Drifters, Conventionalists and Unconcerned [13].

Nonetheless, it can be said that the demographic characteristics of LOHAS consumers in Hungary and the USA are similar. Women, consumers with a university degree and those with a good financial situation are overrepresented among the LOHAS. However, a difference can be found with respect to age. While in the research carried out in the US the average age of LOHAS consumers is 46.7 [14], in Hungary a hybrid lifestyle is characteristic of the younger age group (18–39 years old). This difference is due to the fact that the era of value orientation in the developed countries started 10-15 years earlier than in the countries of Eastern Europe, including in Hungary [19].

Hungarian researchers estimate the proportion of this group within the population differently, with their estimates ranging from 4% to 30% depending on the values they include in their segmentation. Based on the research results of Lehota et al. [52], LOHAS consumers who prefer a hybrid lifestyle represent about 8% of the population in Hungary, within which the most devoted consumers constitute around 4% of the population. Based on the results of Törőcsik [19], they make up less than 25–30% of the population; however, this proportion is expected to increase.

According to our results, five value-based segments can be separated: young trend followers (32.1%), ethical traditionalists (22.6%), young environmentally conscious people (18.6%), uninvolved elderly people (16.4%), and disappointed pessimists (10.3%). The largest cluster, the young trend followers, best reflects the characteristics of the LOHAS consumers' lifestyle. However, this segment cannot entirely be regarded as a consumer group devoted to LOHAS values. The greatest heterogeneity can be observed on the basis of the ethical (competence) values of young trend followers, and a further segmentation of this group was considered necessary in order to ascertain the proportion of the most devoted LOHAS consumers.

Examining the values of the Welch's F-test, it is noticeable that each sub-cluster is most sharply separated from the other on the basis of the two ethical (competence) values, i.e., the following two statements are the strongest cluster-forming variables: "I regularly support the work of charity organizations with donations" and "I do charity work annually". As regards the low element number of the sub-clusters, the groups were not analyzed according to background variables. Based on this finding, it can be stated that within the young trend followers group, it is Sub-cluster 3 that can be described most typically with the hybrid lifestyle characteristics of LOHAS consumers. It makes up 27.1% of the young trend followers, and 8.7% of the total sample. Consequently, based on the results of our research, we can state that they also make up 8.7% of the Hungarian population as a whole.

5. Conclusions

According to the results, it can be stated that the proportion of LOHAS consumers devoted to sustainability in Hungary has reached a level that can be calculated in a reliable way. The increasing number of LOHAS consumers in Hungary suggests that the key to market success for the entrepreneurial sector is the application of sustainable production methods. However, today these technologies also provide competitive benefits since the young trend followers segment also bears the traits of the LOHAS lifestyle, and only shows a weakness in ethical values. These days this segment represents a potential market for sustainable products and services, but at the same time their demands are only partly satisfied. Based on the lifestyle characteristics of the analyzed segment, companies can create their marketing tools according to the demands of the target market.

A value proposition has to be built on the LOHAS sustainable value-based lifestyle: sustainable products with healthy, eco-friendly, and ethical characteristics, combined with an appropriate price. A sustainable supply chain has a pivotal role, being associated with both product and corporate values, and strongly influences consumers' intentions to purchase. Since LOHAS consumers are more committed to certified products, producers and retailers should consider processing their own certifications and promoting this standard to consumers. With regard to the low average age of the Hungarian LOHAS group (namely the Y and Z generations) communication tools should be adapted to the typical features of their age group. In addition, in view of the outstanding ethical values of the LOHAS segment, a more expansive CSR approach is proposed.

Revealing the values of the LOHAS segment contributes to the broadening of the literature. Later on, further research will be necessary to find out whether the situation in Hungary as regards value orientation is similar to that in the other Eastern European countries where the social and the cultural backgrounds are very similar.

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