The factors of Lifestyle of Health and Sustainability influencing pro-environmental buying behaviour

Kamil Pícha [a, *], Josef Navrátil [b]

[a] *University of South Bohemia, Faculty of Economics, Studentská 13, 370 05, České Budějovice, Czech Republic*
[b] *Institute of Geonics CAS, Department of Environmental Geography, Drobného 28, 602 00, Brno, Czech Republic*

ABSTRACT

Lifestyle of Health and Sustainability (LOHAS) consumers are seen as environmentally aware, socially attuned and with a view of the world that takes into account personal, community and planetary outcomes. The main aim is to identify the relationship between the consumer's affiliation with a LOHAS segment and its buying behaviour. It is based on a questionnaire survey among costumers of shopping centers. The possibility of identifying the attitude and tendency among the consumers regarding the five factors as defined by the Annual LOHAS Forum was found by confirmatory factor analysis. Three LOHAS segments were found by cluster analysis with rmANOVA test. We have found age and especially gender as important for differentiation of LOHAS market segment. LOHAS consumers could be identified as a group with a specific buying behaviour. Healthy Lifestyles and Ecological Lifestyles correlate strongly in multivariable space (based on redundancy analysis) with the preference for products by companies with similar social values to those of the respondent, the strong interest in socially responsible consumption, and the preference to domestic and local products. Sustainable Economy negatively correlate with influence by marketing, advertisement and sales promotion, impulse buying behaviour, and importance of the price. It is positively correlated with the preference for Fairtrade products. It seems, that LOHAS factors are influenced by East-West paradigm as Personal Development and Alternative Health Care were of low importance for respondents.

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1. Introduction

Lifestyles as "way of life" (Earl, 1986) influence in all directions and in the fundamental way consumption of population. Then the set ways of consumption cause a pressure on production. A general way of consumption in the "advanced" society is consumerism that was mentioned already by Veblen (1899). Yet, this way of consumption is not sustainable in long term (Thøgersen, 2014) and it is only enabled by conserving uneven position of producing and consuming countries in postcolonial world (Baldwin and Forslid, 2000; Rice, 2007). Therefore, the ways and processes are searched for to support such ways of consumption that are not only free of negative effects but also enabling enhancing quality of consumers' life.

One of the recent lifestyles in the consumer markets is called Lifestyle of Health and Sustainability, commonly known as LOHAS.

Emerich (2000) saw a new breed of consumers — a population that is concerned about human rights, fair trade, the environment, sustainable practices, as well as spiritual and personal development. A global consumer trend of LOHAS has spread from Japan and the USA starting from the late 1990s (Korhonen, 2012). The LOHAS consumers are not necessarily a target group in the common sense; instead, they personify a "new" lifestyle: a new social majority that emphasizes values and is going to revolutionize the consumption markets (Mohr, 2011). Those consumers are seen as environmentally aware, socially attuned and with a view of the world that takes into account personal, community and planetary outcomes (Höfer, 2009). Emerich (2011) sees LOHAS as not only a business strategy or a phenomenon for marketers but also as a window into processes of social change. On the other hand, Kettemann and Marko (2012) suggest LOHAS tends to be used to characterize a group from a marketing point of view. Thus, LOHAS consumers are worth studying from environmental, sociological or marketing point of view.

As LOHAS was found to be important lifestyle in the consumer markets with strong emphasis on environmental awareness we

stated the main aim of this paper to identify the relationship between the consumer's affiliation with the LOHAS segment and its buying behavior.

1.1. Measuring LOHAS and LOHAS types

Generally, LOHAS has not yet gained widespread acceptance as a label. So people who clearly fall into this group might not explicitly identify themselves as LOHAS customers.

Although the segment of LOHAS is obviously difficult to precisely define, some authors suggest concrete products or managerial implications in order to seize or target the LOHAS segment — Shih and Hsing (2012) suggest designing products for LOHAS consumers, Korhonen (2012) explores LOHAS group's perception of packaging, Kim et al. (2013) give advice to restaurant marketers or Wan and Toppinen (2016) present opportunities to suppliers of children's furniture.

LOHAS was initially defined as a market segment that was focused on health and fitness, the environment, personal development, sustainable living and social justice (Emerich, 2011). It has been defined as consisting of five key market segments (Emerich, 2000; Derryberry, 2005; Peterson, 2008; Ottman, 2011; Urh, 2015):

- Sustainable Economy
- Healthy Lifestyles
- Personal Development
- Alternative Healthcare
- Ecological Lifestyles.

This LOHAS set of five main market categories is defined by organizers of an annual LOHAS forum and publishers of LOHAS Journal (Derryberry, 2005).

One of the first to measure LOHAS is the Natural Marketing Institute (NMI) in USA. This institute started doing research about these 10 variables among consumers (Derryberry, 2005):

- The degree of care about maintaining excellent physical health.
- The degree of care about protecting the environment.
- The degree of care about sustainable agriculture practices.
- The degree of care about using renewable energy sources.
- The existence of words-of-mouth towards the family and friends about the benefits of purchasing environmentally friendly products.
- The degree of care about women's issues.
- The degree of care about social consciousness.
- The degree of preference in buying products from companies whose values are like mine.
- The degree of preference in environmentally friendly products and services.
- The willingness to pay 20 percent more for environmentally friendly products.

The Consumer Segmentation Model — the NMI's unique and proprietary segmentation model — began with evaluating over 170 different variables, later narrowed to approximately 15 (Understanding, 2008). The k-means Clustering Method was used. Cluster centers were defined as dense regions in the multivariate space based on a k-means segmentation of the attitudinal variables from the LOHAS survey. The significant differences between mutually exclusive consumer segments are identified (using T-tests).

The LOHAS consumers' behaviour is then measured with respect to their leaning towards five LOHAS factors and based on a reasonable number of variables which the questionnaire survey is feasible with.

Our first hypothesis to be tested is — **H1**: Five key factors (Sustainable Economy, Healthy Lifestyles, Personal Development, Alternative Healthcare, Ecological Lifestyles) are statistically appropriate for measuring LOHAS.

From the point of view of leaning on the LOHAS principles, NMI has in its initial surveys identified four segments (Derryberry, 2005; French and Rogers, 2006): LOHAS consumers, Nomads (where some LOHAS-like behaviours creep in, but it's not a fully integrated lifestyle), Centrists (having more conservative attitudes toward health, social justice and environmental issues) and Indifferent (those who either aren't aware of or don't care about LOHAS issues).

The previous four consumer segments have been updated by NMI in 2006 with a new segmentation model composed of five segments, including (French and Rogers, 2006):

- LOHAS
- Naturalists (they are zealous about their own personal health, and use many healthy and natural consumer packaged goods, but they are not highly driven to durables)
- Drifters (they have more financial barriers, and have not yet fully formed their optimal values structure and ethical consumption standards, they often wish they did more for the environment but they don't)
- Conventionals (they show predisposition to various "practical" LOHAS products and activities)
- Unconcerned (they are distracted by other life activities)

Korhonen (2012) identified three LOHAS segments called "Lohas heavy", "Lohas medium", and "Lohas light" and two other groups called "Not interested" and "Anti-Lohas".

Defining the LOHAS types of consumers seems to be based rather on the extent of their leaning towards the LOHAS values and the behavioural aspects of consumers. Yet, consumer could be more concerned by some of the LOHAS factors than by other ones.

Our second hypothesis is — **H2**: LOHAS types can be distinguished based on combination of five key factors.

The tendency towards "LOHAS behaviour" is not often influenced by both the demographic and the socio-economic characteristics (Urh, 2015). According to Wenzel et al. (2008) LOHAS are an age-indifferent, social class and income independent phenomenon. Jeong and Lee (2012) concluded that the LOHAS attitude and behaviour are not moderated by consumers' gender. Heiler (2015) directly suggests the LOHAS target group to be identified through values, contrarily to the conventional approaches select the samples based on demographic variables.

As most studies shows that LOHAS types are not influenced by demographic and the socio-economic characteristics, we stated our third hypothesis — **H3**: LOHAS types are independent from demographic and the socio-economic characteristics.

1.2. Buying behaviour

The behaviour of consumers when shopping has a number of predictors that could be used to analyse a particular market. Some of them are employed repeatedly for long decades, part of which are questioned or seem to be rather outmoded; some of them were employed later in the past and some of them appeared recently. In the long term, socioeconomic and demographic variables are used in consumer research to develop market segments and predict the market behaviour of individuals (Day et al., 1991; Gunter and Furnham, 2014; Kunc and Krizan, 2018; Spilkova, 2018). The growing disenchantment with this kind of segmentation schemes has led to the investigation of alternatives (Gunter and Furnham, 2014). For instance, it has been held that consumer buying behaviour can be classified by social class and stage in the family

life cycle (Rich and Jain, 1968). Other predictors of consumer behaviour are linked to the study of personality (Kassarjian, 1971), or are classified as economic or non-economic (Arndt and Gronmo, 1977). Further the task-related factors such as the frequency of purchase, the strength of the product preference, the search time, and the package examination could be studied (Cobb and Hoyer, 1986). Some predictors are specifically analysed for a particular sales channel or for a particular market sector (Bellman et al., 1999). The role of various lifestyle variables in the consumer behaviour and marketing mix started to be examined by researchers following the numerous situations when even the lifecycle data could not explain why two households with identical demographic profiles can exhibit radically different behaviour in the marketplace (Gunter and Furnham, 2014).

Our fourth hypothesis is — **H4**: There can be found different directions in buying behavior.

1.3. Buying behaviour and LOHAS

The extent of LOHAS propensity influences the adoption of decision-making criteria when purchasing natural cosmetics (Kim, 2015). Park et al. (2011) investigated the other way around the relationships between shopping value, LOHAS consciousness and LOHAS consumption and concluded that both hedonic and utilitarian shopping values had a positive effect on the LOHAS consciousness and LOHAS consumption. One of the objectives of "Lohasians" is to reduce their total consumption. In their case, it is the style of consumption, which is more thought out and it is based more on the quality and the quantity (Tissier-Desbordes and Giannelloni, 2013). The LOHAS lifestyle oriented people are more often willing-to-pay a higher price for the intangible attributes of the products, such as environmental quality (Wan and Toppinen, 2016).

We can finally state our last hypothesis — **H5**: there are ties between LOHAS types and directions in buying behavior.

2. Materials and methods

Our above presented main aim was reveled and our hypotheses were tested based on data obtained by questionnaire survey among buyers in shopping centers.

2.1. The operationalization of the constructs — the questionnaire

Two measurement tools were set up in order to accomplish the above mention main objective and to test our hypotheses.

2.1.1. Measuring LOHAS factors
LOHAS is a set of five main factors or market categories, as defined by the organizers of an annual LOHAS forum and the publishers of LOHAS Journal (Derryberry, 2005) and adopted by other authors (eg. Emerich, 2000; Peterson, 2008; Ottman, 2011; Urh, 2015):

- Sustainable Economy
- Healthy Lifestyles
- Personal Development
- Alternative Healthcare
- Ecological Lifestyles.

Though many measurement tools are employed to study LOHAS consumer behaviour, most of them are constructed as one-factorial, which means they only measure the intensity of the consumer's tendency to LOHAS lifestyle (e.g. Korhonen, 2012; Kim and Youn, 2014; Huang et al., 2014). However, it was previously proved, that

the partial factors of LOHAS are of a different importance, in particular in the consumer's decision making process (e.g. Derryberry, 2005; French and Rogers, 2006). For that reason, we have employed a 5-factor measurement tool. Each factor was measured by means of three questions (Appendix 1).

2.1.2. Measuring buying behaviour
The tool to measure buying behaviour was created in order to cover as wide as possible spectrum of its aspects. We can cite the importance of price among those aspects (Turčínková and Kalábová, 2011; Vietoris et al., 2016), the importance of quality (Nagyová et al., 2008; Horská et al., 2011), the influence of selected marketing communication tools (Turčínková and Kalábová, 2011), the preference to tried and proven products (Donnelly et al., 1973; Patterson and Richards, 2000), the preference towards domestic and local products (Albayram et al., 2014; Bianchi and Mortimer, 2015; Kesic et al., 2015), impulse buying (Muruganantham and Bhakat, 2013), influence by friends or acquaintances (Viswanathan and Jain, 2013), the interest in socially responsible and environmental friendly products (Boulstridge and Carrigan, 2000; Young et al., 2010; Moser, 2016), interest in Fairtrade (Ozcaglar-Toulouse et al., 2006), and the rate of adoption of new products and technologies (Miller and Buys, 2013; Urh, 2015). Particular variables (see Appendix 2) were measured on a 5-point scale (1 = definitely agree, 5 = definitely disagree).

2.1.3. Measuring segmentation criteria
The questionnaire was completed with basic segmentation criteria with a potential influence on the LOHAS factors. There we can count gender, age, education, income, and the population size of respondents' residences.

2.2. Data collection

The data were collected using an intercept survey with a structured questionnaire. Standardized face-to-face interviews were administered to the buyers in shopping centers in the Czech Republic.

The respondents were approached at the shopping centers. Trained interviewers have collected a total of 500 questionnaires. 17 questionnaires have been eliminated because of incompleteness of answers (Table 1).

2.3. Data analyses

2.3.1. Calculation of LOHAS factors
First the assessment of validity of LOHAS measurement tool was needed to test our first hypotheses (H1). The confirmatory factor analysis (CFA) with ordinary least squares estimation method was used to do this. Model fit of the 5-factor measurement tool was examined using several goodness-of-fit indices: $\chi 2/df$, root mean square error of approximation (RMSEA), goodness-of-fit index (GFI), and adjusted goodness-of-fit index (AGFI). The chi square/d.f. rate is commonly used, as the chi square statistic itself is considered by many to be an unrealistic standard (Long and Perkins, 2003). As the chi square is dependent on a number of observations, the rule of 'close fit' states that chi square/d.f. should be a smaller number than $1 + n/400$ (Steiger, 2009) or less than five for small sample sizes (Dikmen et al., 2016). The values of RMSEA lower that 0.05 indicates a very good fit and the values between 0.05 and 0.08 are an acceptable fit (Browne and Cudeck, 1992). The GFI has ranges from 0 to 1 and scores 0.90 and above are desirable (Long and Perkins, 2003). As the AGFI corrects the GFI for the number of parameters in the model, the value 0.80 or above is acceptable (Long and Perkins, 2003). CFA computations were performed using the

Table 1
The Socio-Demographic Profile of the Respondents (n = 483), data based on own questionnaire survey.

Sample characteristics	%
gender	
female	59.8
male	40.2
age	
18—25	41.2
26—35	14.5
36—45	19.3
46—55	13.3
56 and more	11.8
education	
elementary	11.2
without high school graduation	17.0
with high school graduation	48.2
professional higher education	5.4
university degree	18.2
income	
up to 400 EUR	12.6
400 - 800 EUR	28.0
800 - 1200 EUR	34.6
1200—2000 EUR	20.3
over 2000 CZK	4.6
town size	
up to 500 citizens	23.4
501-2000 citizens	16.4
2001-5000 citizens	10.4
5001-10000 citizens	13.7
10001-20000 citizens	11.4
20001-50000 citizens	6.4
50001-100000 citizens	10.4
100001-1000000 citizens	5.6
over 1000000 citizens	2.5

SEPATH module of Dell STATISTICA 13.0 software package (Statsoft, 2011). After the CFA of the LOHAS measurement tool, Cronbach's alpha internal consistency coefficients were calculated for reliability of the whole scale and each factor. Cronbach's alphas greater than 0.70 are usually accepted as a good measure of consistency for studied factors (e.g. Hunot et al., 2016). Then, for each factor, the composite mean was calculated as a mean of the values of three items measuring each factor (e.g. Chen and Tsai, 2007).

2.3.2. Identifying the LOHAS types

The LOHAS types of respondents were identified by cluster analysis using the values of five LOHAS factors. Hierarchical clustering with the Wards' method based on Euclidean distances was used. The limit of information loss was set to 25%. Differences among the LOHAS types of respondents were analysed in a repeated-measure ANOVA (rmANOVA) to test our second hypothesis (H2). rmANOVA was used as the five factors were not measured independent one from the other, thus responses of the respondents on one factor may influenced responses on the other factors and the degrees of freedom must be reduced (Quinn and Keough, 2002). The differences among means were tested by Tukey HSD tens for the unequal number of n (Robinson, 1998) as the number of respondents in clusters are different.

2.3.3. The LOHAS types vs. the segmentation criteria

The frequencies of observations in categories of gender, age, education, income, and the population size of respondents' residence among LOHAS types were tested using chi-square test (Robinson, 1998) to find answers to our third hypothesis (H3).

2.3.4. Structure of buying behaviour

Our fourth hypothesis was not directly statistically tested, but multivariate explorative statistic was used. The buying behaviour was assessed by the means of principal Component Analysis (PCA) as the length of gradient is 1 (ter Braak and Šmilauer, 2012). PCA was given preference to the factor analysis (FA) as it is statistical more appropriate and also to with regard to the further analysis of the relationship between the structure of components of the buying behaviour and the LOHAS factors. The data were centered and no transformations were made. The ordination diagram was used to describe the linkages among buying behaviour items.

2.3.5. Buying behaviour and LOHAS

After all above mentioned statistical procedures were done we could tested our last hypothesis (H5) leading to fulfill main aim of this paper — to explore the relationships between buying behaviour and LOHAS. The linear-based redundancy analysis (RDA) was opted for constrained (= canonical) ordination. To follow the principle of parsimony (ter Braak and Šmilauer, 2012) only statistical significant LOHAS factors entered the RDA model as stepwise selection of the explanatory variables was applied. The significance of each LOHAS factor was tested by the Monte-Carlo permutation with 999 permutations.

3. Results

3.1. Measuring LOHAS

The overall fit indices for the LOHAS measurement tool are acceptable with the chi square/d.f. = 2.68, RMSEA = 0.059 (90% confidence interval 0.050—0.069), GFI = 0.94, AGFI = 0.91. Our LOHAS measurement tool can be considered as valid. It is also reliable as all Cronbach's alpha coefficients are greater than 0.7 (Table 2). Thus, our first hypothesis was confirmed.

3.2. The LOHAS types

Hierarchical cluster analysis of five LOHAS factors gave results of three LOHAS segments that are comparable in member sizes (110, 167, and 206). Our second hypothesis can be confirmed, too, as rmANOVA for clusters, as well as for LOHAS factors and combination of clusters and LOHAS factors is highly significant (Fig. 1). The group of 206 respondents is a group of respondents with high interest in all five LOHAS factors. The group of 167 respondents is group of respondents with low interest in all five LOHAS factors. The smallest group consist of 110 respondents with medium overall LOHAS interest and diversified interest in particular LOHAS factors. They are interested in factors Sustainable Economy, Healthy Life Style, and Ecological Lifestyles.

3.3. LOHAS types vs. segmentation criteria

Two out of our five measured demographic and socio-economic criteria differ in the frequencies among LOHAS types — it means that our third hypothesis must be refused. Females have a much higher frequency of occurrence in the interested LOHAS group and lower in the not-interested LOHAS group. The gender ratio does not differ from the expected frequencies in the partial-interested LOHAS group (Table 3). The other significant difference was revealed among age categories. The respondents above 36 years are more frequently present (than expected) in the partial-interested LOHAS group and less frequently in the interested LOHAS group. The other great difference between the observed and expected frequencies is in the group of young respondents up to 25 years. They belong to the interested or not interested LOHAS group in significantly lower are the members of this respondents in group of partially interested customers (Table 4).

Table 2
The number of respondents on the particular scales, means, S.D. and Cronbach's alpha for LOHAS measurement tool, data based on own questionnaire survey.

|	definitely no	no	I do not know	yes	definitely yes	mean	S.D.	Cronbach's alpha
Sustainable Economy								
Willingness to pay an extra charge for eco-products	93	95	105	136	54	2.92	1.30	0.83
Willingness to pay an extra charge for a product in an eco-friendly packaging	129	118	92	99	45	2.61	1.32	
Willingness to pay an extra charge for natural food/drinks	89	78	83	138	95	3.15	1.40	
Healthy Lifestyle								
Healthy food for me and family	13	43	72	209	146	3.89	1.02	0.84
Preference to healthy lifestyle	18	48	76	203	138	3.82	1.07	
Important role of healthy food	14	56	91	200	122	3.75	1.05	
EcologicalLifestyles								
Preference to renewably energy sources	27	53	130	173	100	3.55	1.10	0.78
Preference to eco-friendly products	40	88	102	184	69	3.32	1.17	
Use of easily recyclable products	31	77	133	162	80	3.38	1.13	
Alternative Healthcare								
Interest in new experience in acupuncture and homeopathy	101	81	111	111	79	2.97	1.38	0.72
Support to alternative and preventive medicine	73	79	133	123	75	3.10	1.28	
Interest in literature on body&mind style	183	129	62	72	37	2.28	1.31	
PersonalDevelopment								
Practicing yoga, tai chi, etc.	274	80	39	52	38	1.96	1.34	0.75
Frequenting fitness center	167	75	51	119	71	2.69	1.51	
Wellness services consumption	160	93	54	115	61	2.64	1.46	
Whole measurement tool								0.88
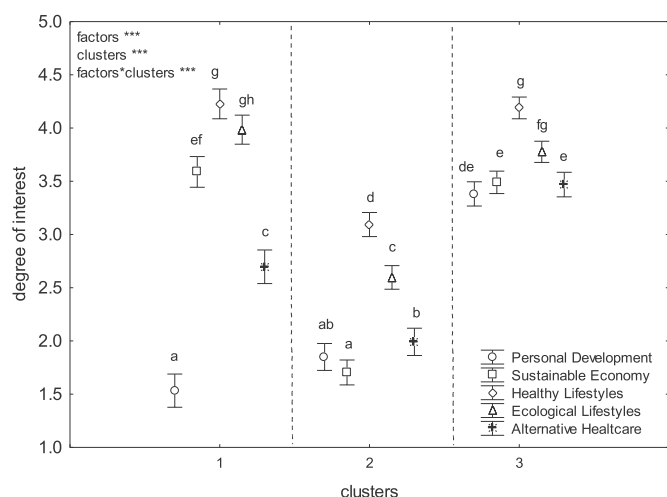
Fig. 1. The result of the rmANOVA model testing the differences in the means of the degree of interest in the LOHAS factors (factors) among the LOHAS types (clusters) and the additivity hypothesis (factors*clusters). The means with the same letter do not differ significantly in the Tukey post-hoc test for unequal n (i. e. p > 0.05). The significance level for the rmANOVA (upper left corner in the graph): *** = p ' 0.001. Data based on own questionnaire survey.

Table 3
The observed and expected frequencies of the gender categories among LOHAS types, Chi-square: 24.8283, d.f. = 2, p < 0.001. Data based on own questionnaire survey.

		male	female
partially-interested LOHAS	observed	40	70
	expected	44	66
not-interested LOHAS	observed	92	75
	expected	67	100
interested LOHAS	observed	62	144
	expected	83	123

3.4. Buying behaviour

The first PCA axis is, by far, the most important gradient in our dataset (Fig. 2). It alone explains the 25.7% of dataset variability. The second PCA axis explains 13.9% of the dataset variability. These two (and especially the first one) are of the biggest importance in our dataset. The structure of the data on the buying behaviour is dominated by one important component and one marginal component. The first component is composed of those statements that are directly and indirectly related to the various aspects of the perceived quality. The marginal component represents the extent of the perceived influence by the tools of promotion. An interesting partial finding is that those respondents who are concerned with the various aspects of the perceived quality of a product are ready to try new brands when the specific quality required could be expected. As at least two meaningful components were found we can confirm our fourth hypothesis.

3.5. Buying behaviour and LOHAS

Four in five LOHAS factors are significantly influencing structure of the buying behavior and thus our last hypothesis can be confirmed. Those four LOHAS factors can explain 12.1% (in adjusted value) of variability in the data on buying behaviour. The main part of this variability can be explained by the first axis (10.6%). This axis strongly correlates with four aspects of buying behaviour — the preference for products by companies with similar social values to those of the respondent (number 4 in Fig. 3), the strong interest in socially responsible consumption (number 5 in Fig. 3), and the preference to domestic and local products (number 8 in Fig. 3) and it can be explained by the Ecological Lifestyles and the Healthy Lifestyle LOHAS factors (Fig. 3). The items influence by marketing, advertisement and sales promotion (number 2 in Fig. 3), impulse buying behaviour (number 10 in Fig. 3), and importance of the price (number 11 in Fig. 3) are negatively correlated with Sustainable Economy. On the other hand, the factor of sustainable economy is positively correlated with the preference for Fairtrade products (number 9 in Fig. 3).

4. Discussion

We have found that four out of our five hypotheses can be confirmed and one rejected. We will further discuss three main topics that arisen from our results: structure of LOHAS factors, buying behavior, and buying behavior within LOHAS types.

Table 4
Observed and expected frequencies of age categories among LOHAS types, Chi-square: 25.7906, d.f. = 8, p < 0.01. Data based on own questionnaire survey.

		18—25	26—35	36—45	46—55	56 and more
partially-interested LOHAS	observed	26	16	27	22	19
	expected	45	16	21	15	13
not-interested LOHAS	observed	75	26	24	20	22
	expected	69	24	32	22	20
interested LOHAS	observed	98	28	42	22	16
	expected	85	30	40	27	24
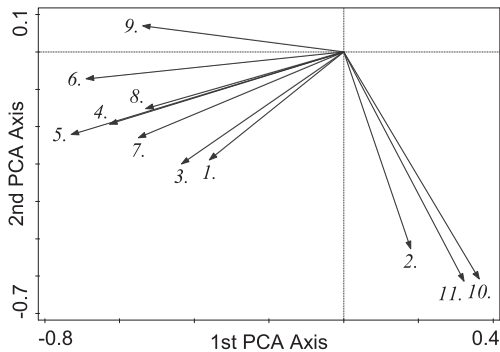
Fig. 2. Components of buying behaviour. (1 - preference to the own experience or to recommendation from friends; 2 - influence by marketing, advertisement and sales promotion; 3 - Preference to time-proven brands; 4 - reference for products by companies with similar social values to those of the respondent; 5 - strong interest in socially responsible consumption; 6 - preference to high quality and efficient products made on natural basis using the most recent; recipes and technologies; 7 - importance of quality; 8 - preference to domestic and local products; 9 - preference to Fair Trade products; 10 - impulse buying behaviour; 11 - importance of the price), data based on own questionnaire survey.
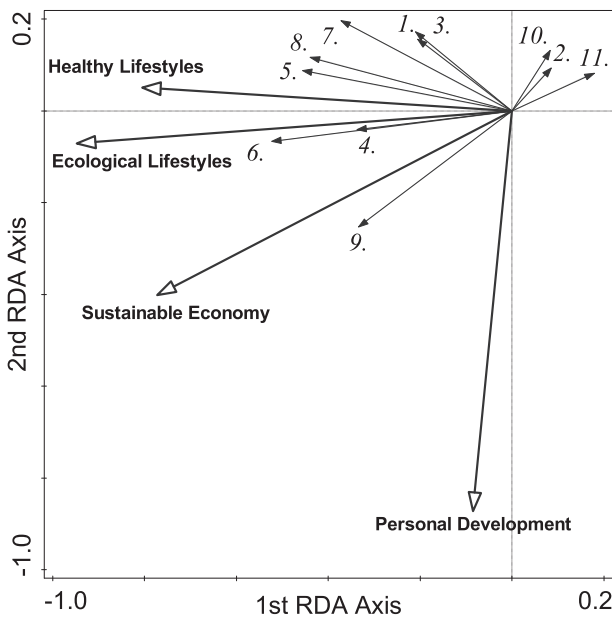

Fig. 3. The Influence of the LOHAS factors on the structure of the buying behaviour (1 - preference to the own experience or to recommendation from friends; 2 - influence by marketing, advertisement and sales promotion; 3 - Preference to time-proven brands; 4 - reference for products by companies with similar social values to those of the respondent; 5 - strong interest in socially responsible consumption; 6 - preference to high quality and efficient products made on natural basis using the most recent; recipes and technologies; 7 - importance of quality; 8 - preference to domestic and local products; 9 - preference to Fair Trade products; 10 - impulse buying behaviour; 11 - importance of the price), data based on own questionnaire survey.

4.1. LOHAS

The five factors, as defined by the organizers of an annual LOHAS forum and the publishers of the LOHAS Journal (Derryberry, 2005) have been identified in the studied sample of respondents. These factors were confirmed previously by several authors from developed western countries (Emerich, 2000; Peterson, 2008; Ottman, 2011; Urh, 2015). Our results show that this structure is also applicable in transition economics and, thus, we confirmed universality of use of this tool. While the above-cited researches (Derryberry, 2005; French and Rogers, 2006; Russo, 2008; Korhonen, 2012) identify those segments absolutely according to the extent of the interest in (or leaning towards) LOHAS, our research shows the groups with a lower interest in LOHAS. Important interest was found only in some of the LOHAS factors (in accordance with the factors defined by NMI). On the other hand, there is an existing group with a high declared interest in LOHAS, in which case the factors of Personal Development and Alternative Health Care are not considered as important by the members of this group. These results issuing from the study of a so called transition economy market could be linked for instance to the still lower purchasing power in such markets — compared to the developed Western markets (Schuh, 2007) or to the poorer knowledge or to a generally different consumers' attitude. Consumers in those markets are historically strongly price-sensitive (Shama, 1992; Schuh, 2000, 2014; Nagyová et al., 2008) and higher prices affect buying of products, such as Fair Trade products (e.g. Navrátilová et al., 2015), organic food (e.g. Rödiger and Hamm, 2015) or others. Although there is a convergence of the Central and Eastern European countries towards the Western life style, yet we find out weaker sustainable consumption and healthy lifestyle compared to the Western countries (Liobikienė et al., 2016; Hubelova et al., 2018; Majerová, 2018) — it was related with poorer health knowledge in the past (Steptoe and Wardle, 2001), including the so called medical tourism (Connell, 2006; Zsarnoczky, 2016). Generally, the new era of value orientation occurred earlier in Western than in Central and Eastern European countries (CEE) (Szakály et al., 2017; Opitz et al., 2017).

Sustainable consumption patterns are still rather emerging in CEE countries but with a strong dynamics (Vadovics, 2017; Tóth et al., 2018). Health consciousness is still lower in CEE countries, even if there is a recent positive trend (Bruschi et al., 2012).

Contrarily to conclusions of Jeong and Lee (2012) and Urh (2015), that the LOHAS attitude and behaviour are not moderated by the consumers' gender, we have found differences between male and female consumers. Women seem to be more interested in LOHAS; as found by Wan and Toppinen (2016), they are more often willing to pay an extra charge for the products that are in accordance with the LOHAS lifestyle. Women are often found as more environmentally conscious or more opened to environmental sustainability than men (Han et al., 2009; Kassinis et al., 2016). Environmental and health consciousness are stronger in females than in males (Kriwy and Mecking, 2012), too.

Age was found to be another factor influencing the identified

LOHAS types — for instance in case of consumers' attitudes to the sustainability or sustainable/green consumption (e.g. Haron et al., 2005; Vermeir and Verbeke, 2006; Hume, 2010). In case of healthy lifestyles, consumers' attentiveness grows with the increasing age (Chen, 2011). Most of higher-age respondents are generally interested in LOHAS, but not as much in the particular factors of Personal Development and Alternative Health Care. Studies have shown, young to middle-aged patients are more likely to use alternative medicine (Elder et al., 1997; Bishop and Lewith, 2010) and they tend to be female (Bishop and Lewith, 2010).

4.2. Buying behaviour

Two factors of food buying behaviour and consumers' decision making were identified in the studied sample of respondents — one principal factor related to the various aspects of perceived quality and one weaker factor related with marketing. One group of respondents even seems to be more resistant to the influence of the marketing activity of companies. Tissier-Desbordes and Giannelloni (2013) suppose that some adherents of the LOHAS style to rather support "demarketing" and consumption reduction.

4.3. Buying behaviour and LOHAS

The LOHAS customers significantly declare they search for the same values at the producers; they prefer local producers, and require high quality and products on natural base. They could also be considered as "early adopters" who search for latest recipes, formulas and new technologies. Those aspects are closely related with the positive attitude and tendency to the Healthy Lifestyles and Ecological Lifestyles. The local producers are in an advantageous position as they can form a direct and long-term relationship with their consumers by selling their high-quality products locally — consequently they can work in a cost-effective and optimal way (Bakos, 2017). This consumers' attitude could issue from the idea that a local food system is "more 'natural' or environmentally benign" (Hinrichs, 2003) — for example due to the assumed CO_2 reduction thanks to the "no travelling of products around the world" (Angus, 2013) — and the assumption that use of products from local producers can improve social relations, even if the importance of local products and local production has been also found as overvalued or overemphasized by several authors (Larder et al., 2014; Hinrichs, 2003).

21. Personal Development was confirmed to be an independent factor on the measured aspects of buying behavior; even if LOHAS types were previously found to take a strong interest in personal development and growth, including investigations of mindbody-emotion-spirit connections, self-help, leadership, and life-balance topics (Urh, 2015). Consumers' spirituality could be linked with ecological lifestyles as far as it could substitute consumption (Naess, 1990). Yet, some elements of personal development seem not to be always in accordance with other LOHAS factors. Care of well-being is not strongly in accordance with positive attitude to the sustainable consumption (Jackson, 2005).

5. Conclusions

Main aim of this paper was to identify the relationship between the consumer's affiliation with the LOHAS segment and its buying behavior. We stated five research hypotheses leading to fulfill this aim. Based on several statistical approaches we can conclude that the aim was done. First the LOHAS segments were identified within the studied sample of the respondents. Likewise, those consumers with a positive attitude to LOHAS or even the LOHAS adherents were found to have a different kind of buying behaviour compared

to other consumers. The LOHAS group of respondents even varies in their buying behaviour depending on their preference to particular factors of the LOHAS tendency.

The presented research confirmed the possibility to identify among consumers their attitude and tendency to the five factors as defined by annual LOHAS forum and publishers of LOHAS Journal and adopted by other authors and of course by the NMI, too. It seems to be useful to more precisely identify LOHAS consumers based on particular factors than simply classify them according to the intensity of the consumer's tendency to LOHAS.

Some socio-economic segmentation variables were found to be important for LOHAS differentiation. There is no clear socio-demographic group, which can be considered as LOHAS. Yet, some differences were identified from the demographic point of view — older age group is generally interested in LOHAS, but rather in the three of five factors: Sustainable Economy, Healthy Lifestyles and Ecological Lifestyles. Women are more interested than men.

As the socio-economic or demographic differentiation of the consumers is rather not correlated with their attitude and tendency to the LOHAS and its particular factors, other aspects of this market segments should be searched. The applicable segmentation criteria could be behavioural criteria as the research revealed the consumers with a positive attitude to LOHAS prefer local producers, require high quality and effective products on natural base and they could be considered "early adopters", too, who search for latest recipes, formulas and new technologies.

Further research could do a deeper research about the differences within the LOHAS segment according to the particular LOHAS factors and the search for particular criteria to better identify the potential partial segments of the LOHAS adherents.

Managers should not try to identify a single LOHAS segment to target. As the LOHAS segment exists across the socio-economic and demographic groups, they have to carefully select the criteria to identify their potential customers. They also have to consider their communication channels and sales channels they currently use if they seek address the LOHAS segment. Particularly the communication channels are often differentiated according the very demographic and/or socio-economic segments. Based on the researchers' findings, they should consider developing and designing specific products for the LOHAS segment, which seems not to be a definitely successful strategy (considering the revealed differences within the LOHAS segment as well as the fact some authors find the LOHAS segment difficult to precisely define).

Appendix 1

I am willing to pay an extra charge of eco-friendly products.
I am willing to pay an extra charge for eco-friendly packaging products bought.
I am willing to pay an extra charge for food or drink products without added artificial colourants and preservatives.
I strive to eat healthy and to ensure healthy eating for my family.
I prefer the healthy lifestyle.
Nutrition plays an important role for me.
I prefer renewably energy sources.

I prefer eco-friendly products.

I make use of easily recyclable products.

I am interested in new experience in acupuncture and homeopathy.

I prefer and advocate alternative and preventive medicine.

I am interested in literature on body&mind style.

I practice yoga, tai chi, etc.

I frequent fitness centers.

I use up wellness services.

Appendix 2

My choice is preferably influenced by my own experience, or by recommendations from my friends and relatives.

I am influenced by companies marketing, advertisements, sales promotion etc.

I prefer proven brands and products.

I usually buy products made by companies with social values similar to mines.

I require the products to be produced as social responsible as possible.

I am seeking for high quality and efficient products made using the most recent recipes and technologies.

Product quality is an important criterion for my buying decision-making.

I prefer products made by domestic producers.

I buy Fairtrade products.

I am buying products based on a sudden impulse.

Product price is an important criterion for my buying decision-making.

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