THE RELATIONSHIP BETWEEN VALUES AND GENERAL ENVIRONMENTAL BEHAVIOUR

Szabolcs Nagy[1], István Piskóti[2], László Molnár[3], Anita Marien[4]

[1]*University of Miskolc, Hungary, marvel@uni-miskolc.hu*
[2]*University of Miskolc, Hungary, piskoti@uni-miskolc.hu*
[3]*University of Miskolc, Hungary, marml@uni-miskolc.hu*
[4]*University of Miskolc, Hungary, marma@uni-miskolc.hu*

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Abstract

Growing global social and environmental problems draw attention to rethinking traditional marketing approaches. There are many signs of social and environmentally conscious marketing being now rediscovered. The main objectives of our comprehensive research project on social marketing were to find out how values influence general environmental behaviour. In order to achieve our objectives, we conducted a questionnaire survey with a representative sample of 501 respondents in 2011 in Hungary. Security proved to be the most important, extremely important value, which supports pro-environmental behaviour. Excitement, followed by being well respected and fun and enjoyment in life, all of which are negatively correlated by pro-environmental behaviour, are the least important values in Hungary. Additionally, we found that more than the half of the Hungarian population usually lived green. However, only weak correlations were found between environmentally conscious behaviour and value items. Since the direct influence of values on GEB is only weak, more variables (e.g. attitudes) are needed when modelling someone's pro-environmental behaviour.

Keywords: social marketing, values, LOV, general environmental behaviour (GEB), Hungary, behavioural segmentation

JEL Classification: M31, Z13, A13

Introduction

No country in the world is immune to social and environmental problems. Growing social and environmental issues such as unemployment, poverty, crime, global warming, etc. claim urgent handling of the roots of the problems and draw attention to rethinking traditional marketing approaches as marketing management is often considered to be one of the roots of the above mentioned problems. The marketing science relatively early recognized the importance of answering questions on social and environmental issues. Kotler and Zaltman (1971) were the first to use the term of social marketing. Andreasen (2003) reviewed the history of social marketing from its birth to its present status as a respected discipline. According to Andreasen, the birth date of social marketing was in the mid and late 1960s. He cited Harvey (1999), who stated that promotion of family planning in India, more specifically the marketing of Nirodh condoms in 1964, was the very first social marketing activity. Social marketing is a multidisciplinary approach to handling social problems. Social marketing blends the knowledge of psychology, sociology, anthropology, political science and communication theory with advertising, public relations, and market research. Its focus is usually on voluntarily accepting, rejecting, modifying, or abandoning behaviour of the target audience for the benefit of individuals, groups, organizations, or society as a whole. The main objective of social marketing is to create positive social change.

Green or environmentally conscious behaviour is more focused on the environment. Its origin dates back to the mid-1970s, when the American Marketing Association (AMA) held the first workshop on "Ecological Marketing" in 1975. The proceedings of this workshop were published in printed form entitled "Ecological Marketing", which is considered to be the first book on green marketing (Hennion and Kinnear, 1976). Early definitions of environmental/green marketing were rather narrow. Hennion and Kinnear (1976) defined ecological marketing as "the study of the positive and negative aspects of marketing activities on pollution, energy depletion and nonenergy resource depletion". Later, Polonsky (1994) reviewed the evolution of the definitions. Nowadays, green marketing can be defined as "… all activities designed to generate and facilitate any exchanges intended to satisfy human needs or wants, such that the satisfaction of these needs and wants occurs, with minimal detrimental impact on the natural environment." (Murthy, 2010).

There are many signs of social and environmentally conscious marketing being now rediscovered as the impact of social and environmental problems are more and more obvious for everyone. In or modern days, it is very important for the whole society- especially for social marketing managers - to address social and environmental issues at the same time as they are really interdependent. Poverty, which is a social

problem, can cause people to cut down trees, which can lead to deforestation of a region, which is a serious damage to the environment (Kerr et al., 2004). Whereas environmental problems like global warming can cause social disasters. For example the rising sea level due to global warming can endanger whole nations. Brown (2001) published a shocking article at the Earth Policy Institute webpage on this issue, where he wrote that "In October 1987, Maumoon Abdul Gayoom, President of the Maldives, noted in an impassioned address to the United Nations General Assembly that his country was threatened by rising sea level. In his words, his country of 311,000 was "an endangered nation." With most of its 1,196 tiny islands barely 2 meters above sea level, the Maldives' survival would be in jeopardy with even a 1-meter rise in sea level in the event of a storm surge."

Methodology

Social and environmental issues must be handled together. Strengthening pro-social and pro-environmental behaviour at the same time is a must as the level of environmentalism and sustainable development is still low in our country. Only a few people do live green in Hungary and there are a lot of social problems to address, which is the background of our research problem.

People's behaviour is always determined by their core values. Core values have a big impact on our lifestyle and consumption patterns, and are learnt during the socialization and it is very hard to change especially after childhood. We studied the related literature to find out which core values had an influence on pro-environmental behaviour in Hungary, and found no publications on this topic. Therefore, in accordance with the new challenges in marketing, we decided to analyse the relationship between values and pro-environmental behaviour in Hungary, which was our main scientific research objective. Moreover, we aimed to identify the value profile of the general environmental behaviour based segments of the Hungarian population; to identify the importance of core values and to analyse the direct influence of values on pro-environmental behaviour.

In order to achieve our objectives, we conducted a questionnaire survey with a representative sample of 501 respondents in July and August 2011 in Hungary. This paper is a part of a comprehensive research project on social marketing in Hungary by the research team of the authors, Marketing Institute, University of Miskolc, Hungary[1]. This broader research project comprises the analysis of the field of perceived social problems, pro-environmental behaviour, health-consciousness and social identity.

In order to measure core values we used the LOV scale , which was developed by researchers at the University of Michigan Survey Research Centre (Kahle, 1983) on the theoretical basis from Maslow's (1954) and Rokeach's (1973) papers. The LOV is an easy-to-use, yet powerful construct as it considerably simplifies the ranking task of 18 Rokeach value items. The LOV scale works with nine variables representing the nine terminal values. Two of the items in the LOV (sense of accomplishment and self-respect) are identical to RVS items; the remaining LOV items either combine several RVS items or generalize a specific RVS item (Schwartz and Bilsky, 1987). Accoring to Kopanidis (2009), the advantage of LOV is its ability to separate the influence of demographics and values on consumer behaviour. Internal, external and interpersonal values comprise the LOV construct. Sense of security, sense of belonging and being well respected are considered to be the External Values, while warm relationships as well as and enjoyment in life are Interpersonal Values. Self-fulfilment, self-respect, sense of accomplishment and excitement are the internal values. (Kopanidis, 2009). Respondents were asked to answer the question: "To what extent do you think the following values are important - play a central role - in your life?". We used a five point importance scale to quantify the responses.

To measure pro-environmental behaviour in Hungary, the revised General Ecological Behaviour (GEB) scale was used in our survey. The original General Ecological Behaviour scale (GEB scale) is made up of 38 items representing different types of ecological behaviour and some non-environmental, pro-social behaviour as well (Kaiser et al., 1999). When developing the revised GEB construct, we missed out three ecological behaviour items from the original GEB measure, but added nine new items, too. In the light of our previous research findings, we cut items that did not prove to have significant effect on pro-environmental behaviour in Hungary as follows: "In supermarkets, I usually buy fruits and vegetables from the open bins.", "I do not know whether I may use leaded gas in my automobile." and "I use a cleaner made especially for bathrooms rather than an all-purpose cleaner.". Our revised GEB measure consists of 36 items strictly

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focusing on environmental behaviour. The newly added items were supposed to cover behaviours we thought important to analyse such as buying environmentally-friendly products or organic foods; participation in selective waste collection; buying products made of recycled materials; not buying anything from companies being socially or environmentally non-responsible; not buying products tested on animals; preferring energy efficiency when purchasing new household devices; preferring local products and foods; not traveling by air; and last but not at least avoiding eating too much meat. We used the yes or no (dichotomous) question format to quantify the level of general environmental behaviour of each respondent. The revised GEB scale therefore is a unidimensional Rasch scale, and the degree of someone's ecological behaviour can be expressed in a scale from 0 to 1, where zero represents the least environmentally conscious behaviour and 1 represents the most environmentally conscious behaviour.

To measure social and environmental problem sensitivity, we developed a construct containing nineteen items. We collected the most important social and environmental problems including poverty; crime; worsening working conditions; alcohol, cigarettes and drug use; environmental issues; unhealthy lifestyle; minorities; regional inequalities; worsening conditions of education; low birth-rate; decline of cultural values; lack of free time; cultural isolation; overconsumption; ethnical and religious fanatics, conflicts; starvation and lack of drinking water; epidemics and uncured diseases; wars and armament as well as overpopulation. Respondents were asked to rate the importance of each problem in a five point scale, where 1 represented no problem, whereas 5 represented the most crucial problem.

Research Findings

As far as the importance of LOV items concerned, we found that security is the most important value in Hungary (Figure 1.). Our research findings show that a sense of accomplishment also plays very important role in Hungarian people's lives. The Hungarians considered self-respect, warm relationships with others and sense of belonging as equally important values. Self-fulfilment is also important for the Hungarians. The least important value in Hungary is excitement, followed by being well respected and fun and enjoyment in life.

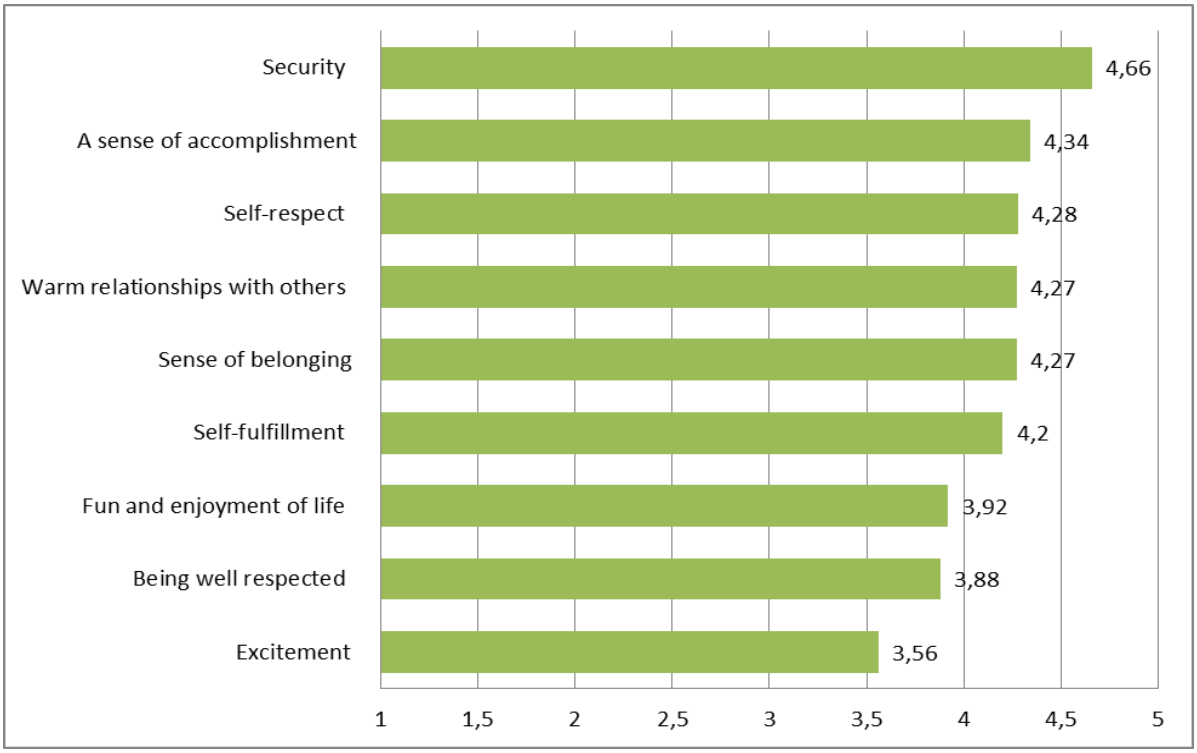

Figure 1. Importance of LOV items in Hungary

The level of pro-environmental behaviour in Hungary is higher than expected. We found that more than the half of the Hungarian population usually lived green, which is really very promising even if we know that this result was based on self-assessment (revised GEB mean= 0.5, standard deviation=0.157). To segment the Hungarian population, behavioural based approach (the revised GEB scale) was used. We

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decided to divide our respondents into four segments based on their GEB scores. Distribution of segments can be seen in Table 1. The most pro-environmental segment, the dark greens, comprises respondents with GEB scores between 0.75 and 1.00, whereas at the other extreme the dark browns segment comprises respondents with the lowest GEB scores (below 0.25). Only a few people belonged to either extreme segment. We found that most people in Hungary lived green or brown.

Table 1. Distribution of Segment

Segments	Revised GEB Score	Percent
Dark Browns	0.00-0.24	6.99
Browns	0.25-0.49	42.51
Greens	0.50-0.74	45.11
Dark Greens	0.75-1.00	5.39
Total		100.00

Poverty proved to be the most important social problem in Hungary (mean=4.44), followed by crime (4.34) and the worsening working conditions (4.26). Alcohol, cigarettes and drug use is also an important social issue (3.97) in our country. Hungarian people also considered environmental issues as an important problem to address (3.8). Moreover, our respondents identified three significant social problems. They are respectively: minorities (3.72), regional inequalities (3.72) and the worsening conditions of education (3.68).

We found only weak correlations between environmentally conscious behaviour (revised GEB) and the items of Kahle's LOV (Figure 2.). The strongest, even weak, positive correlation between GEB and warm relationships with others was found (0.166). It was followed by sense of belonging (0.145), a sense of accomplishment (0.140), self-fulfilment (0.121), security (0.109) and self-respect (0.098). We found the strongest negative correlation between environmentally conscious behaviour and being well respected (-0.073). Excitement (-0.0.56) as well as fun and enjoyment in life (-0.032) as values are also negatively correlated with pro-environmental behaviour.

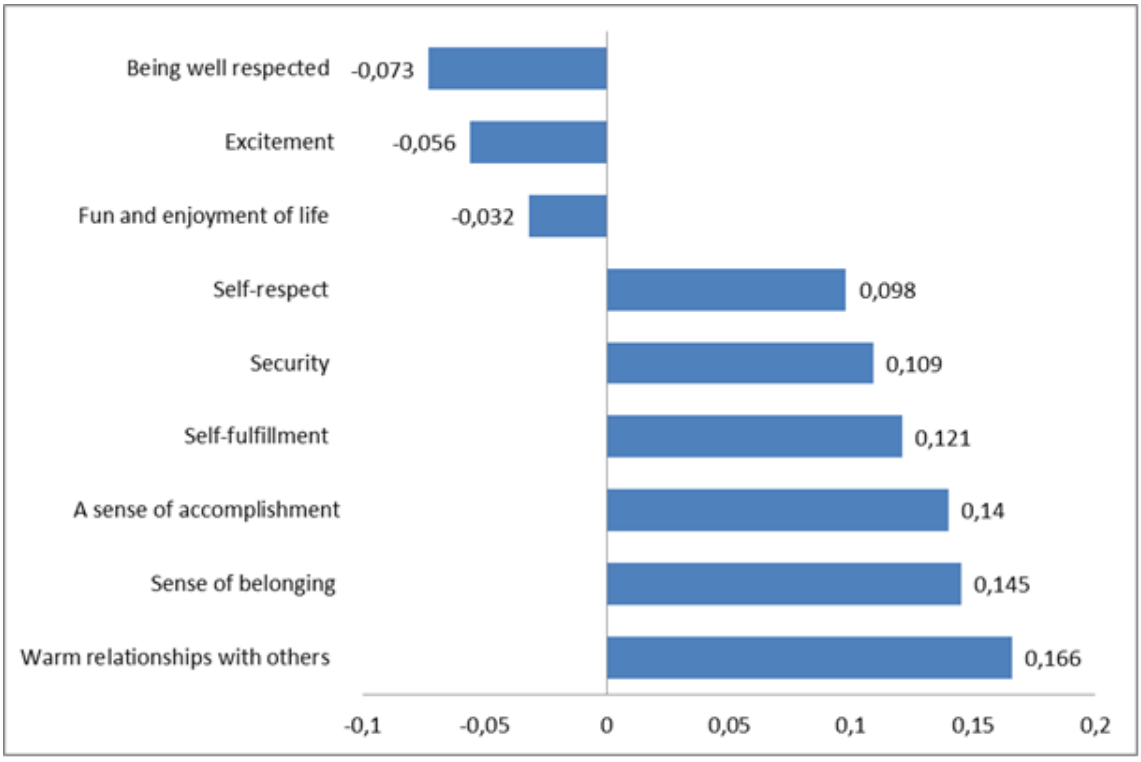

Figure 2. Correlation between pro-environmental behaviour and values

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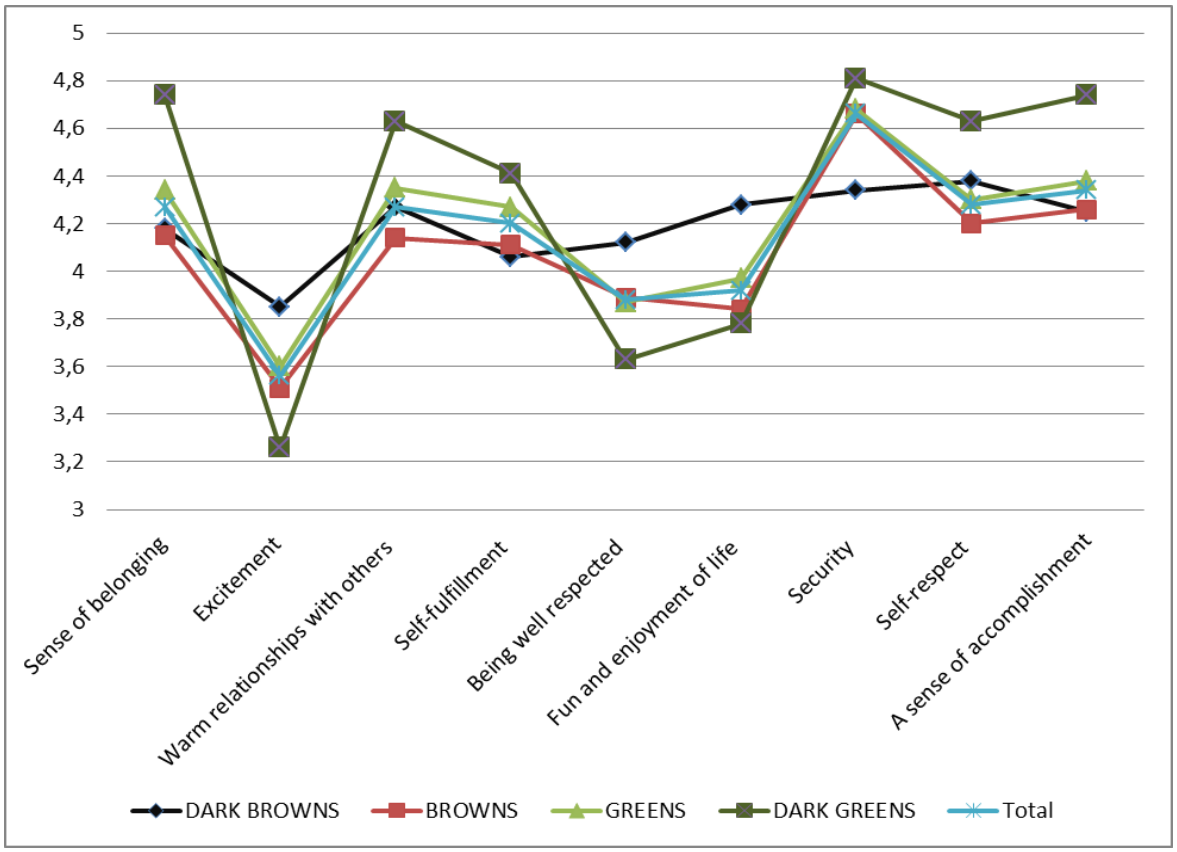

Figure 3. The importance of values by GEB-based segments

The value profile of segments showed that sense of belonging, warm relationships with others, security, self-respect and a sense of accomplishment are significantly more important values for the members of the most environmental conscious segment (the dark greens) in Hungary, whereas excitement, being well respected and fun and enjoyment of life played less important role in their lives. In contrast to them, the members of the least environmentally conscious segment, the dark browns, seek respect, excitement, fun and enjoyment in their lives.

In order to find out how values are directly influencing pro-environmental behaviour, we used linear regression analysis. In our model, the dependent variable was the revised GEB scale, the predictors were the LOV items. The ANOVA table reports a significant F statistic, indicating that using the model is better than guessing the mean (Table 2.).

Table 2. ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1.088	9	.121	5.299	.000
Residual	10.884	477	.023		
Total	11.972	486			

As a whole, the regression is adequate for modelling pro-environmental behaviour. Nearly 9% of the variation in general environmental behaviour is explained by the model (Table 3.).

Table 3. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.301a	.091	.074	.15105

Even though the model fit looks positive, the first section of the coefficients table (Table 4.) shows that there are too many predictors in the model. There are a few non-significant coefficients, indicating that these variables do not contribute much to the model. To determine the relative importance of the significant predictors, take a closer look at the standardized coefficients. The second section of the coefficients table

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shows that there is no problem with multicollinearity. For most predictors, the values of the partial and part correlations do not drop sharply from the zero-order correlation. This means, for example, that much of the variance in pro environmental behaviour that is explained by "warm relationships with others" is not also explained by other variables.

Table 4. Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.246	.067		3.666	.000					
	Sense of belonging	.015	.009	.082	1.621	.106	.146	.074	.071	.753	1.328
	Excitement	-.014	.007	-.103	-1.956	.051	-.055	-.089	-.085	.687	1.455
	Warm relationships with others	.030	.010	.158	2.952	.003	.170	.134	.129	.665	1.504
	Self-fulfilment	.012	.009	.066	1.274	.203	.129	.058	.056	.716	1.397
	Being well respected	-.023	.007	-.155	-3.109	.002	-.067	-.141	-.136	.769	1.300
	Fun and enjoyment of life	-.011	.008	-.066	-1.320	.188	-.032	-.060	-.058	.770	1.298
	Security	.016	.012	.060	1.292	.197	.109	.059	.056	.877	1.140
	Self-respect	-.002	.011	-.009	-.157	.875	.098	-.007	-.007	.640	1.563
	A sense of accomplishment	.029	.011	.142	2.648	.008	.140	.120	.116	.662	1.511

The tolerance is the percentage of the variance in a given predictor that cannot be explained by the other predictors. Thus, the big tolerances show that only 15%-30% of the variance in a given predictor can be explained by the other predictors. A variance inflation factor greater than 2 is usually considered problematic. As the largest VIF in the table is 1.563, there is no problem with multicollinearity.

We found that "warm relationship with others" contributed the most to the model because it has a largest absolute standardized coefficient. Pro environmental behaviour is also very much influenced by the value "being well respected" and the "sense of accomplishment". It must be mentioned that the importance of value item "being well respected" has got negative effect on pro-environmental behaviour, similarly to "excitement", "fun and enjoyment of life" and self-respect. The more important these values are for someone, the less probable he or she lives green. In our model, sense of belonging, self-fulfilment and security proved to be values supporting pro-environmental behaviour.

This model measuring the direct influence of values on pro-environmental behaviour has an acceptable level of prediction power as we know that values also have an indirect effect on GEB through attitudes and behavioural intentions.

Conclusions

Growing social and environmental problems must be addressed by modern marketing science. In order to do so, it is necessary for social marketing managers to identify the most important issues before developing social marketing strategies. In Hungary, issues like poverty, crime and the worsening working conditions are in the first place, but environmental problems are also significant. A campaign to solve environmental problems must focus on making pro-environmental behaviour more popular. One's lifestyle and behaviour is directly and indirectly influenced by his or her core values. In Hungary, security proved to be the most important, extremely important value, which supports pro-environmental behaviour. Our research findings showed that the "sense of accomplishment", which is also a pro-environmental value, played very important role in Hungarian people's lives, whereas the least important values in Hungary were excitement, followed by being well respected and fun and enjoyment in life, which are negatively correlated by pro-environmental behaviour. This might be the reason why we found that more than the half of the

Hungarian population usually lived green. This result seems to be very promising for social marketing managers and manufacturers and/or distributors of environmentally friendly products.

We did behaviour based segmentation and found that the four resulting segments showed significant differences regarding their structure of Kahle's List of values (LOV) items. Nevertheless, it turned out that one's core values only slightly affected directly his or her pro-environmental behaviour. Since this influence is only weak, more variables (e.g. attitude components, norms, etc.) are required when modelling someone's pro-environmental behaviour. This is one of the limitations of this paper. Other limitation of the study stems from the research technique we used. In the future, it would be advisable for us to use observation when quantifying general environmental behaviour instead of self-assessment.

Nevertheless, our research findings point out the importance of shaping values by environmental and social education. Pro-environmental values such as warm relationships with others must be strengthened for example in schools. We are absolutely sure that our research finding can be used in practice by social marketing and social advertisement managers when developing strategies and campaigns.

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