Environmentally conscious behaviour in Hungary

The level of environmentally conscious behaviour (ECB) in Hungary is still low. In order to increase environmental consciousness in Hungary, ECB must be analysed and understood. Our hypothetical model of ECB was developed on the theory of planned behaviour. After testing our model we found that environmental values have a strong impact on behaviour intention (EBI) and good intention (EBI) is often not converted into action, so constraint variables play an important role in changing consumer's mind in Hungary. Much to our surprise, we found that environmental knowledge (EK) has a relatively strong direct impact on GEB. This suggests that what we know about the environment directly influences our actions: what we do for the environment in Hungary

Keywords: environmentally conscious behaviour, model, LOV, environmental knowledge, environmental values, Hungary, social marketing

Track: Marketing in Emerging and Transition Economies

1. Problem formulation

Global environmental problems, depletion of resources (oil, gas, water, etc.), serious damages to the environment and overpopulation are considered to be the most important global issues of the post-modern age. Environmentally conscious marketing (ECM) integrating other social sciences is looking for solutions to the above mentioned problems. ECM therefore has to concentrate on analysing behavioural patterns in order to make people's behaviour, who are customers as well, more environmentally conscious. That is why understanding green consumer behaviour, especially analysing the relationship among values, attitudes, perceived behavioural control, behavioural intention; norms and situational factors (moderators) is of utmost importance.

The level of environmentally conscious behaviour (ECB) in Hungary is still low (Hofmeister et al., 2011). In many cases the constraint variables of environmentally conscious behaviour and green consumption are strong enough to change positive attitudes into negative actions, but it also happens that the core values of the customer are against ECB, or the norms (internal and external) have negative impact on the expected behaviour. In order that one can turn Hungarian consumers into more environmental conscious shoppers, it is essential to understand the fundamentals of green buying behaviour. The complex, general model of ECB in Hungary has not yet been developed and tested.

This paper is a part of a comprehensive research project to see the big picture on social marketing issues in Hungary. The whole project aims to identify crucial social issues, the level of general social involvement, health- and environmental consciousness of the Hungarians. This paper strictly focuses on analysing the relationships among values, attitude components, behavioural intention and general ecological behaviour.

2. Research objectives

The objectives of our specific research on ECB in Hungary were to develop a complex model of environmentally conscious behaviour; to identify the elements of the model and the relations between them; to find out to what extent values are influencing attitudes and behaviour; to identify attitude components and to measure the impact of attitude (cognitive and affective components) on behavioural intention and general environmental behaviour.

3. Conceptualization and operationalization

Hypothetical model of environmental conscious behaviour (ECB) has been developed (see Figure 1) on the basis of the theory of planned behaviour (Ajzen (1985)), Kahle's (1983) List of Values (LOV), the components of environmental attitudes and the GEB scale developed by Kaiser, Wölfing & Fuhrer (1999) as well as Kennedy's (2009) model explaining the gap between environmentally-supportive behaviour (ESB) and environmental values. The core of the model of ECB is the theory of planned behaviour (Aizen, 1985) which specifies the nature of relationships between beliefs and attitudes. According to this model, 'attitude toward the behaviour, subjective norm, and perceived behavioural control lead to the formation of a behavioural intention' (Ajzen, 2002). In particular, 'perceived behavioural control is

presumed to not only affect actual behaviour directly, but also affect it indirectly through behavioural intention‘(Zimmerman et al., 2005).

As far as social values concerned, the LOV scale 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 has been widely used to study the influence of social values on consumption behaviour (Shoham, Florenthal, Rose and Kropp, 1998) as it considerably simplifies the ranking task of 18 Rokeach value system (RVS) (Rokeach, 1973). LOV (Kahle, 1983) includes 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). Kahle and Kennedy (1989) stated LOV could serve as a key value measurement instrument in the study of consumer similarities and differences. Kopanidis (2009) states that another advantage of LOV is its ability to separate the influence of demographics and values on consumer behaviour. In the LOV construct internal, external and interpersonal values can be found. The Internal Values are as follows: self-fulfilment, self-respect, sense of accomplishment and excitement. 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 (Kopanidis, 2009).

We adapted the construct measuring the three components of attitude - environmental knowledge (EK), environmental values (EV) and Ecological behaviour intention (EBI) - from Kaiser, F. G., Wölfing S. & Fuhrer U (1999), who used a structural equation model to confirm their proposed model and found that environmental knowledge and environmental values explained 40 per cent of the variance of ecological behaviour intention which, in turn, predicted 75 per cent of the variance of general ecological behaviour. They also found that, ‘as far as Environmental Knowledge concerned, it should not be related with ecological behaviour strongly because its influence is attenuated by environmental attitude and ecological behaviour intention supposing that factual knowledge about the environment is a precondition of one’s environmental attitude’. They proved that environmental values are related to ecological behaviour intention, which are mediated by a third variable, which is ecological behaviour intention. They also found that ecological behaviour intention is strongly related to ecological behaviour. In our model we used their scale with twenty-eight items to establish the three environmental attitude measuring components: Environmental Knowledge (EK), Environmental Values (EV) and Ecological Behaviour Intention (EBI). A 5-point Likert scale that ranged from agree totally 1 to disagree 5 was used in our questionnaire.

Constraint variables were adopted from Kennedy (2009) et al., who explored three categories of explanatory variables to account for the gap between environmentally-supportive behaviour (ESB) and environmental values such as individual (basic values), household (support from other household members, time and money) and societal (perceived control over the decision, community environmental services). Their analysis provides a better understanding of why good intentions did not always translate into environmentally supportive behaviour. In their paper the authors demonstrated the relative importance of the three categories of Constraint Variables.

To measure the general ecological behaviour in Hungary we adapted the GEB scale developed by Kaiser, Wölfing és Fuhrer (1999), who have empirically justified that values have impact on ECB through environmentally-conscious behaviour intention. The GEB scale assesses general ecological behaviour by considering different ecological and pro-social

behaviours. Since our model is strongly focuses on explaining ECB, we simplified the original GEB scale by not involving the pro social variables into our model. According to Kaiser, Wölfing és Fuhrer (1999) each of the behaviours in the GEB scale 'has a given difficulty to be carried out, which, in turn, represents an estimate of all the constraints beyond people's control. The easier a behaviour is to carry out, the less constraints have to be assumed. This behaviour difficulty is estimated for each behaviour by considering the number of people who behave correspondingly i.e. the probability that anyone will behave that way regardless of his or her tendency to behave ecologically. One's tendency to behave ecologically is estimated by considering the number of ecological behaviours he or she has carried out i.e. the probability that somebody will behave ecologically given that behaviours differ in difficulties.' As a result of the nature of the GEB scale, the level of general Ecological behaviour was measured in our model in a form of a Rasch-scale that assesses behaviour by considering the tendency to behave ecologically and the difficulties in carrying out the behaviours (Rasch, 1961).

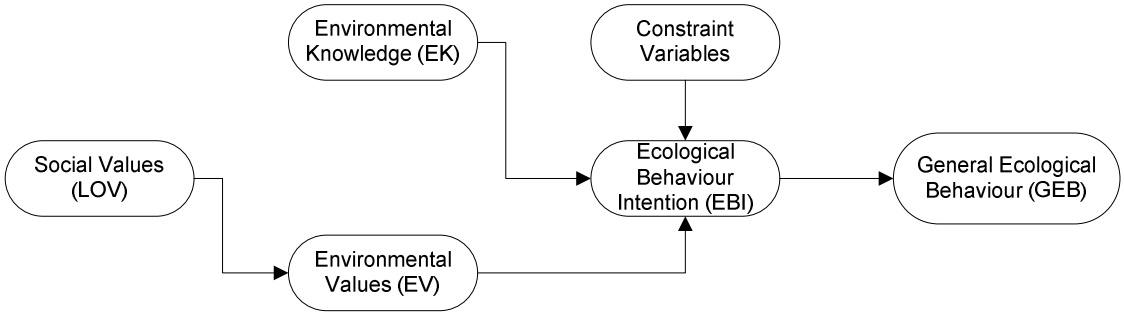

Figure 1 Hypothetical model of environmentally conscious behaviour (ECB)

We hypothesized that social values have direct impact on environmental values, which has direct effect on ecological behaviour intention. At the same time, environmental knowledge and the constraint variables also has an impact on EBI. A strong relationship between behaviour intention (EBI) and actual behaviour (GEB) is also hypothesized.

4. Data Collection and analysis

To testing our hypothetical model, we conducted a questionnaire survey, which was a part of a big research project related to social marketing. The data were collected through personal interviews in July and August 2011 throughout the county. The sample size selected for this analysis was comprised of 1603 respondents aged 18 and above, which means 95% confidence level and ±2,45% confidence interval.

5. Results

Hypothetical model of environmentally conscious behaviour (ECB) was tested by multidimensional linear regressions (see Figure 2). As far as the first submodel including the attitude components (EK, EV and EBI) as well as social values (LOV) concerned, the

coefficient of multiple determination is average (R Square=0,28), therefore its explanatory power of the construct is adequate.

Environmental values are lightly influenced by social values (Standardized Beta Coefficient, SBC=0,098), whereas Environmental Values have a strong impact (SBC=0,524) on Ecological Behaviour Intention. The indirect impact of social values on behaviour intention is very weak, therefore social values plays only limited role in environmental conscious behaviour in Hungary. However, norms and one's environmental values strongly support pro-environmental behaviour. Contrary to what we expected, we found that there was no significant relationship between Environmental Knowledge and Ecological Behaviour Intention.

The second subconstruct analysed to what extent environmental knowledge, environmental values and ecological behaviour intention explain general ecological behaviour. The explanatory power (29%) of this construct is satisfactory (the coefficient of multiple determination, R Square= 0,291). We found that there was a moderate (R Square=0,384), significant relationship between ecological behaviour intention (EBI) and general ecological behaviour (GEB). It suggests that good intention (EBI) is often not converted into action in Hungary, so constraint variables play an important role in changing consumer's mind. We found that convenience is the strongest hindering factors of environmental conscious behaviour in Hungary. The more important convenience is for a customer, the less environmental conscious he or she will be (Pearson's correlation coefficient = - 0,27). Lack of financial resources to behave more environmentally friendly is the second strongest constraint variable (Pearson's correlation coefficient = 0,18), which means that many Hungarian customers simply cannot afford to pay the 20-50% extra price of green products. The role of being not aware of what I do is wrong (lack of information), and the lack of time in not behaving in an environmentally friendly way is not significant.

We found no direct connection between environmental values (EV) and general ecological behaviour (GEB), but the strong link between them through ecological behaviour intention (EBI) as a mediator is justified. Much to our surprise, we found that environmental knowledge (EK) has a relatively strong (R Square=0,384) direct impact on general ecological behaviour (GEB). This suggests that what we know about the environment directly influences our actions, what we do for the environment in Hungary. Between them no mediator effect has been found as there is no significant relationship between EK and EBI.

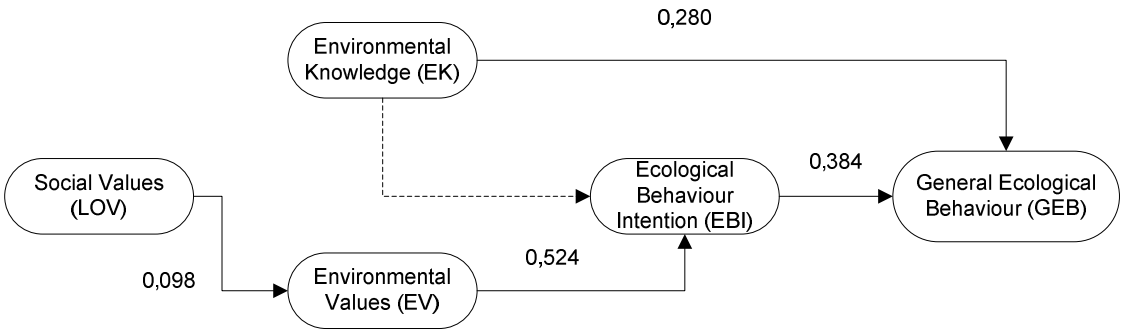

Figure 2
Empirical model of environmentally conscious behaviour (ECB) in Hungary

6. Implications

We suggest that our model should be used in developing social marketing strategies. On the one hand, actions must be made to increase the importance of environmental values in Hungary as it has got strong effect on one's intention to behave in an environmentally friendly way. On the other hand, environmental knowledge must be strengthening. More comprehensive environmental education programs and PR campaigns are required to increase the knowledge base of customers. The more one knows about the most important environmental issues, the more probable that his or her behaviour will be more environmentally conscious.

Since convenience is the most important constraint variable, people should be educated to see the adverse effects of their desire for hedonism. The government and the state has got important role in igniting the above mention changes, and we found that it would be the government's responsibility to support such programs. We hope that our paper shall contribute to increasing environmental consciousness in Hungary.

7. References

1. Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl & J. Beckmann (Eds.), Action control: From cognition to behavior. Berlin, Heidelber, New York: Springer-Verlag.
2. Ajzen, I (2002). Perceived Behavioural Control, Self-Efficacy, Locus of Control, and the Theory of Planned Behaviour. Journal of Applied Social Psychology 32(4): 665- 683
3. Hofmeister Á., Kelemen K. Piskóti M.(2011): Environmentally Conscious Consumption Patterns in Hungarian Households. Society and Economy in Central and Eastern Europe 1, 51-68.
4. Kahle, L.R, Ed (1983) Social Values and Social Change: Adaptation to Life in America, New York: Praeger
5. Kahle, L.R., Beatty S.E., Homer, P., (1986) "Alternative Measurement Approaches to Consumer values: The List of Values (LOV) and Values and Lifestyle (VALS)" Journal of Consumer Research Vol 13 pp. 405-409
6. Kaiser, F. G., Wölfing S. & Fuhrer U (1999) : Environmantal attitude and ecological behaviour, Journal of Environmetal Psychology, 1999 (19), 1-19.
7. Kennedy, E. H. et al.: Why We Don't "Walk the Talk": Understanding the Environmental Values/Behaviour Gap in Canada in Human Ecology Review, Vol. 16, No. 2, 2009
8. Kopanidis, F. (2009) Towards the Development of a Personal Values Importance Scale (PVIS) - Application in Education, ANZMAC 2009 paper
9. Maslow, A. (1954) Motivation and Personality New, York: Harper & Row.
10. Rasch, G. (1961). On general laws and the meaning of measurement in psychology, pp. 321–334 in Proceedings of the Fourth Berkeley Symposium on Mathematical Statistics and Probability, IV. Berkeley, California: University of California Press
11. Rokeach, M., (1973) The nature of human values, The Free Press, New York, NY
12. Schwartz, S. H., Bilsky, W., (1987) 'Toward a Universal Psychological Structure of Human Values' Journal of Personality and Social Psychology, Vol 53 No 3 pp.550-562

13. Shoham, A., Florenthal, B., Rose, G.M., Kropp, F., (1998), ‘Differences in Value Importance: The impact of Age and Gender in the Israel Population’ Advances in Consumer Research Vol 25 pp. 468-47
14. Zimmerman, R., Noar, S., Chaisamrej, R., & Thomas, L. (2005). A Comparison of Five Social Psychological Models of Condom Use: Implications for Designing Prevention International Communication Association, 2005 Annual Meeting, New York, NY: 1-29