

CONNECTION BETWEEN SOURCES OF INFORMATION AND MOTIVATION FOR ENVIRONMENTAL AWARENESS

Margit WEISZ

Kaposvár University, Faculty of Economic Science, H-7400 Kaposvár, Guba Sándor utca 40.

ABSTRACT

In my study I have examined the connection between sources of information and motivation for environmental awareness. Studies show that the acts believed as environmentally conscious do not always lead to the expected reduction. I suppose that one of the reasons of such a situation is the lack of the right information. Based on this, I think that with better understanding of the consumers' information sources, we would be able to send more effective messages about the right behaviour and we could reduce the impact of our incorrect environmental activity. For better understanding I revealed the most popular sources of information with on-line survey and I searched for connection between their authenticity and their motivational effects. The research shows that the most popular source of information is the Internet, but many people also rely on previous studies, friends, informative programs. In addition, 75% of the respondents would like to get more information in connection with environmentally responsible behaviour. My results show that more than 30% of the respondents think experts are the most reliable informational source. It can be seen that the most popular sources of information do not match up with the most trusted source. It is also revealed that the family is the first among the motivational factors, followed by taxes, friends and the community. Based on my results, I suggest that it is necessary to provide right information to the people regarding environmentally conscious behaviour. It must be said what to do, thereby facilitating decision-making. We would do it with modern, interactive and widely available sources of information and by involving experts.

Keywords: information, motivation, environmental awareness, right information, effectiveness, experts, services, community

INTRODUCTION

After Rachel Carson's work, the book *Silent Spring* was published in 1962, the idea of environment protection and environmental awareness appeared in the life of mankind. Widely this work drew the attention to the negative process which had started in the environment. The book shocked many people, who realised that activities without knowing the consequences and ignoring the negative environmental impacts are able to ruin our whole living place (Akenji, 2014; Carson, 2007; Rác, 2013a).

Despite this recognition, consumption of nowadays has a significant effect on the surrounding environment. This way of life is based on the continuous purchase of products, while it does not answer the individuals' constantly researched, perhaps long-lost happiness (Hamilton, 2010; Kerekes, 2011; Zsóka et al., 2011).

Research has shown that in general the individuals are aware of the environmental problems, even more they practise some activities as well. But activities that need more effort or renunciation are not so popular at all. In addition, there are activities that are under-estimated in environmental impact or their real impacts are unknown. These forms are the following for example: generating food waste, excessive meat consumption, flying by plane or purchasing environmentally friendly, but imported goods. These activities have a bigger effect than selective waste collection, switching off the lights, although individuals do not realize their importance properly. The reason for this situation could be the lack of information besides other factors (*Akenji, 2014; National Geographic, n.d.; Carlsson-Kanyama, 1998; Chen and Chai, 2010; Csutora, 2012a, 2012b; Monostori, 2007; Nagy, 2012a; Zsóka et al., 2011*).

It is known that the environmental effect of „green“ and non-green consumers are not significantly different. Behavioural change exists, but it does not have the effect that we expect in advance. This phenomenon is called Csutora-paradox by Sándor Kerekes or named as Behavioural-Impact Gap. This theory states that the easily implemented activities or the activities perceived environmentally conscious based on false information, lead easily to higher ecological footprint than the neutral or non environmentally conscious actions (*Chen and Chai, 2010; Csutora, 2012b; Kerekes, 2016, 74. p.*).

On the basis of the Csutora-paradox it is clear that individuals need guidance based on professional background in order to practise the right environmentally conscious behavioural actions (*Csutora, 2012a, 2012b; Hofmeister-Tóth et al., 2011*).

Starting from the problems mentioned during my research I examine the role of information sources on environmental awareness motivation. We need to know from where consumers gather their information, what they consider to be an authentic source and which are those few which encourage them to do real activities. It is important to know where the individuals gather information from. Knowing these sources targeted messages can be sent regarding appropriate consumer behaviour. We are able to avoid higher environmental impact in this way.

MATERIAL AND METHODS

As the methodology of my primary research I chose online interviews. The survey was carried out in April 2016. I applied the “snowball” which belongs to the non random sampling techniques (*Malhotra, 2009*). In the questionnaire I used structured and open questions. My topics were the following:

- the respondents' perception of their own behaviour in relation to environmental issues,
- sources of information as the basis of environmental behaviour,
- demand for additional information,
- incentives which cause environmental act,
- recent change in behaviour and the triggering information source.

During the study I got 243 evaluated responses. The distribution of the respondents according to background variables is shown in *Table 1*.

Table 1

The distribution of the respondents according to background variables

Name	Distribution of the respondents	
	Count	%
Total interviewed	243	100.0
By gender		
Woman	135	55.6
Man	108	44.4
By age groups		
25 years or under	23	9.5
Between 26-35 years	73	30.0
Between 36-50 years	82	33.7
Between 51-60 years	49	20.2
61 years or over	16	6.6
By education		
Primary school	1	0.4
Vocational training	5	2.1
Graduation	55	22.6
Diploma	175	72.0
Others (technician, etc.)	7	2.9
By the existence of a child in the family		
Yes	108	44.4
No	135	55.6
By type of settlement		
Village	98	40.3
City under 100 000 inhabitants	91	37.4
City over 100 000 inhabitants	29	11.9
Capital city	25	10.3
By the presence of any chronic disease within the family		
Yes	188	77.4
No	55	22.6
By per capita income		
Significantly below the average.	2	0.8
Slightly below average	9	3.7
Average	96	39.5
Slightly above average	121	49.8
Significantly above the average	15	6.2

The representativeness of the sample cannot be shown afterwards, but due to the relatively high number of responses received general conclusions can be drawn. The results may be useful to examine the overall behaviour and attitude of the pattern.

In the empirical study I used the following main statistical indicators:

- percentage form using crosstabs,
- for the percentage distributions of significant correlations I used Chi² test (Green and Salkind, 2010; Malhotra, 2009).

RESULTS AND DISCUSSION

The perception of environmentally conscious behaviour

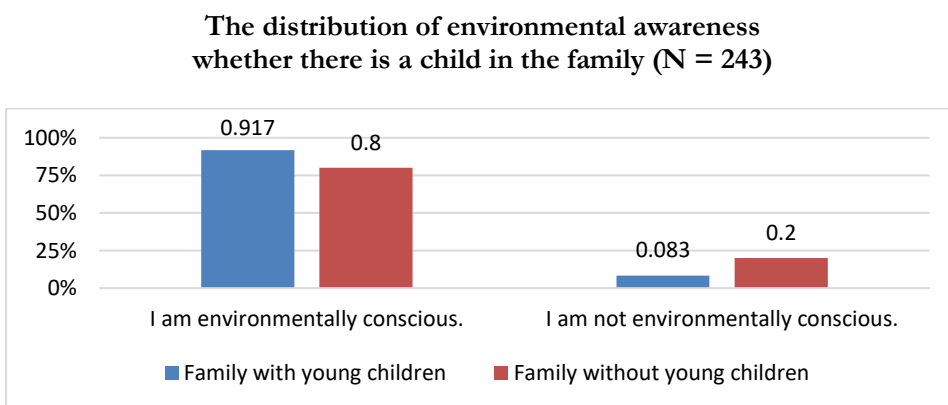
It is known from the literature that people consider themselves to be environmentally conscious, but only a few of them act according to this rule. The number of those is even less who are able to achieve any reduction in their environmental impact (eg. reduction in ecological footprint) (Csutora, 2012b).

In connection with this, my survey revealed that 85.2% of the respondents said themselves to be environmentally conscious. This was their subjective perception. This ratio seems to be very good in itself, but we know that on the one hand the respondents often try to give the socially expected answers in interviews and on the other hand their own judgement can be wrong.

The results obtained showed a significant correlation with the presence of small children within the family ($p = 0.011$). The results are shown in Figure 1.

The results show that respondents who have a young child in their family are more likely to be environmentally conscious. This result is explained by the fact that responsibility for the future of the child may encourage some to environmental behaviours. I consider this to be an emotional motive, which according to the literature, is often stronger than other incentives that affect the mind. In addition, the result is similar to that research which states the following: one of the main reasons of environmental consciousness of the Hungarian population is the responsibility for children (Nagy, 2012b; Rácz, 2013b).

Figure 1



There was also a significant correlation between the assessment of environmental awareness and the type of residence of respondents ($p = 0.018$). The results

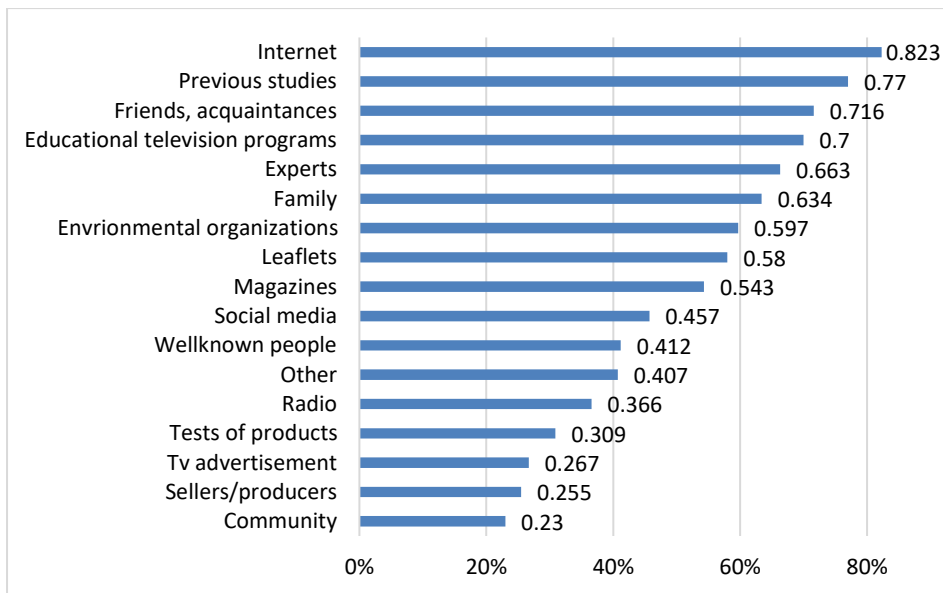
showed that the smaller the settlement of respondents were, the more environmentally conscious they were. This result is explained by the fact that people living in villages have more direct connection with nature and therefore their environmental involvement is higher.

Sources of information about the environmental behaviour

I examined from where the respondents gather information related to environmentally conscious behaviour. I have given more opportunities ahead from which the respondents could choose. The purpose of the question was to find out from what channels, media the information reaches consumers regarding to environmental conscious behaviour. It was necessary to identify the channels which potentially could be used to encourage environmentally conscious behaviour. The results are shown in *Figure 2*.

Figure 2

The distribution of information sources (N = 243)



The results show that the Internet, which is already the main source of information today, has the leading role in the field of environmental awareness. But the role of the previous studies cannot be neglected which partly underly the behaviour according to the literature (*Zsóka et al., 2011*). High proportion of friends, acquaintances and family may suggest that the respondents take into account the views and suggestions of people standing close to them in this area as well. The prestigious location of educational television programs and experts (which offer more professional information) may suggest that individuals are open to information based on professional grounds.

Examination of additional information needs and the most authentic sources of information

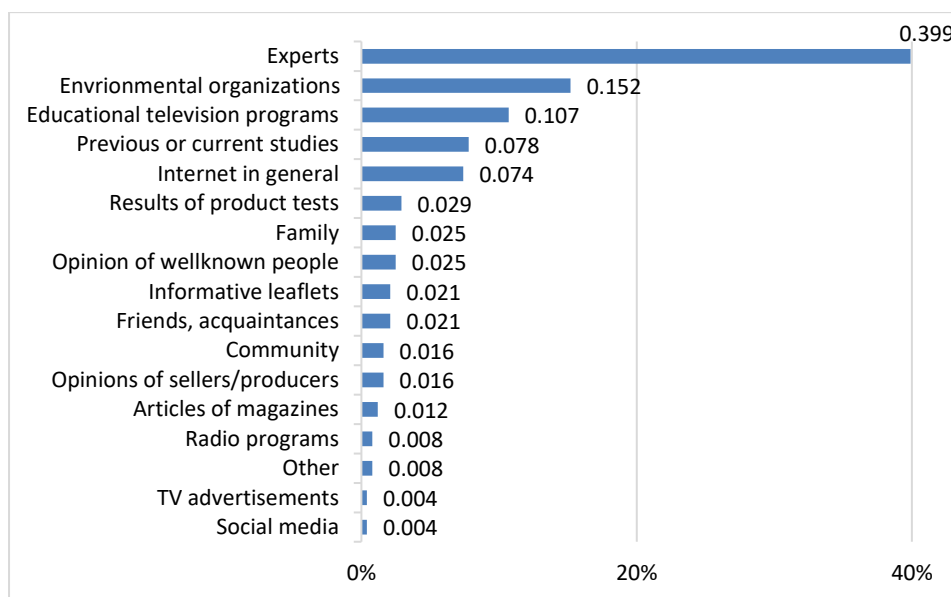
I have examined whether there is a need for more information in connection with environmental awareness. We know based on the findings of the literature that consumers are relatively well informed about the environmental problems. Even they have knowledge about environmentally conscious activities. In connection with this question my aim was to find out if the individuals require any further information about the environmentally conscious behaviour beside the daily information flood (Gleim et al., 2013; Hofmeister-Tóth et al., 2011; Schafferné Dudás, 2008; Young et al., 2010; Zsóka et al., 2011).

On the basis of the results, we can say that 3/4 (75.3%) of the respondents answered that they would like to receive more information regarding environmentally conscious behaviour. This result suggests that the respondents are open to additional information and they are willing to extend their knowledge in this field.

In connection with this, I have examined which information sources seem to be the most authentic according to the consumers. This was necessary to find out which channel was the most trusted by individuals and in the future might be a motivational tool. The results are illustrated in Figure 3.

Figure 3

Distribution of the most authentic information sources (N = 243)



It can be seen that above 1/3 of the respondents think of the experts as the most authentic source of information. This is followed by the 15% ratio of the environmental organizations and the educational television programs, previous studies and the Internet.

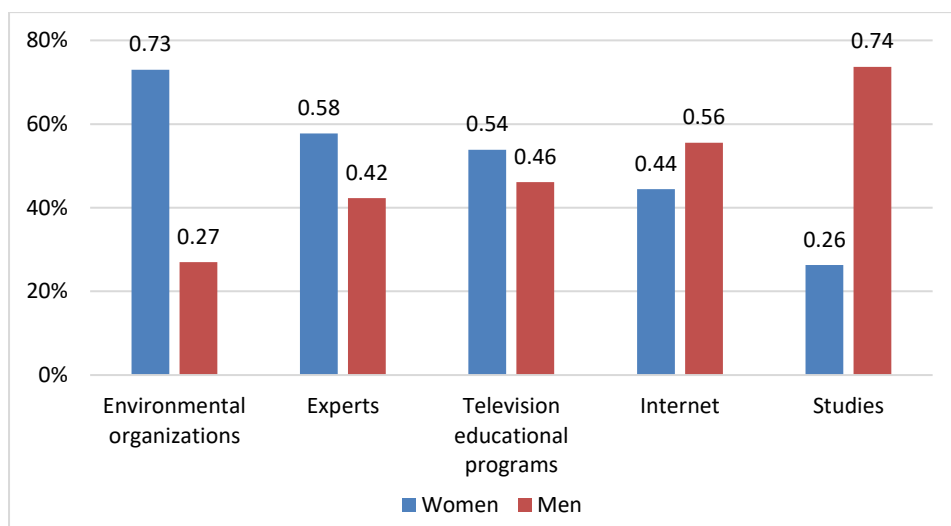
I conclude from the obtained results that respondents are aware of the fact that the most trusted information is provided by experts. Also I would point out that the results of the most common sources of information (Internet, studies, friends, educational programs) do not match the most reliable source of information (experts). This contradiction probably relates to the literature which says consumers know how to act, but they do not act according to their knowledge (Hofmeister-Tóth *et al.*, 2011; Zsóka *et al.*, 2011).

In this case the respondents know what is the most authentic source of information, however other sources are more popular among them. In my opinion the aim is the following: experts should not just be authentic for the consumers, but also should have been looked at as a potential information source or behind the more popular sources of information there should be a professional background.

There was a significant correlation between the most reliable sources of information and the gender of respondents ($p = 0.029$). The results are shown in *Figure 4*.

Figure 4

Distribution of the most authentic sources of information according to gender (N = 197)



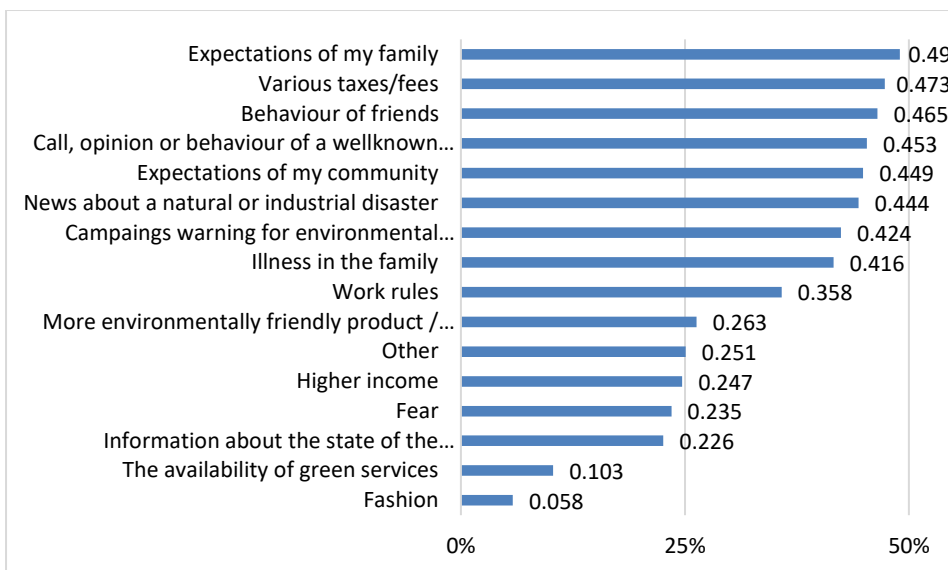
It can be seen that women consider the environmental organizations, experts and educational programs more reliable than men. The internet and previous studies are more reliable for men. I think the reason for the difference is that women prefer to accept the opinions of others, while men rely more on their own views.

The examination of incentives of environmentally conscious behaviour

I examined the factors, which encourage the environmental awareness of the respondents. More could be chosen from the different, predetermined incentives. The data are shown in *Figure 5*.

Figure 5

The ratio of the factors encouraging conscious action (N = 243)



It can be seen that the family has nearly 50% ratio besides others. So the family of the respondents has the greatest influence on behaviour. According to the literature, families have an important role in the rejection or adoption of environmental awareness (Nagy, 2012a; Rácz, 2013a).

The different kinds of taxes and fees were mentioned by respondents in high ratio. It can be said that it is not easy to avoid these kinds of external factors. So they have a strong ability to influence our behaviour. However, it should also be noted that the external effects can even cause resistance and it can manifest itself in non-environmentally conscious behaviour (eg. illegal dumping). So when using these incentives, increased attention should be paid to asserting the necessity of these actions and compensate the concerned individuals for their believed grievance (Kerekes, 2011; Zsóka et al., 2011).

In the following respondents mentioned the friends, well known (opinion leader) people and community as motivational factors in high ratio. This may be based on the consumer need that they would like to belong somewhere. Therefore if the friends or other community have environmental conscious behaviour, then the individual tries to behave accordingly to reach the acceptance of the group. In this context it is worth mentioning that the current consumer society celebrities (or opinion leaders) have an important role in the sale of products. As people want to be similar to the people they follow, therefore they copy their behaviour (eg. they wear similar clothes, same make-up). So if an opinion leader and followed person behaves in an environmentally responsible way and advertises that, then the people following him/her can copy this behaviour. The point is that this activity should have a professional background (Bower and Mateer, 2008; Schafferné Dudás, 2008; Varga, 2012).

The mentioning of disasters was significant, too. The reason for this is that this kind of news can build fear or even guilt in individuals and it may affect (temporarily) the behaviour change. The campaigns also reached significant ratio among the responses. This result suggests that individuals remember the campaigns for a relatively long time. I also would like to highlight the similarly high ratio (about 41%) of the illness in the family. I suppose that there is a relationship between environmental awareness and domestic chronic diseases. This could be explained with the following: disease of a potentially environmental origin could launch an emotional impact in the individuals. If individuals assume that the problem has an environmental origin, then they begin to pay more attention to different environmental problems (Nagy, 2012a; Rácz, 2013a; Zsóka et al., 2011).

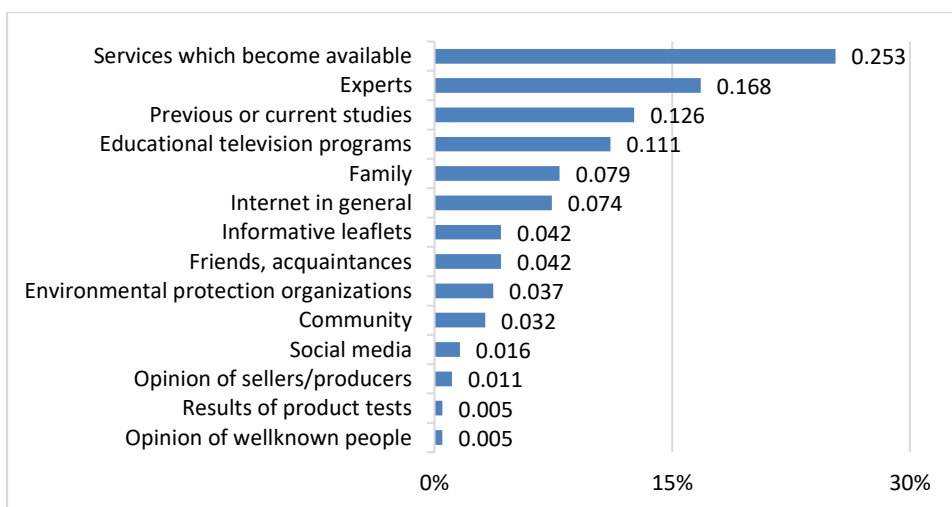
Investigation and exploration of the causes of the behavioural changes

I examined whether the respondents' behaviour changed in an environmentally conscious way or not. With this question I tried to find the answer whether there was any development, improvement in the field of environmentally conscious behaviour in the case of the sample group. Based on the results nearly 80% (78.2%) of the respondents had a change in the behaviour into a more environmentally conscious direction.

I asked what the main triggering factor was that caused a behaviour change among those who had a positive behaviour change. I compared these results with the results related to the sources of information. With this I examined the correlations between the sources of information and the factor triggering behavioural change. The results are illustrated in *Figure 6*.

Figure 6

The main drivers into a more environmentally conscious direction (N=243)



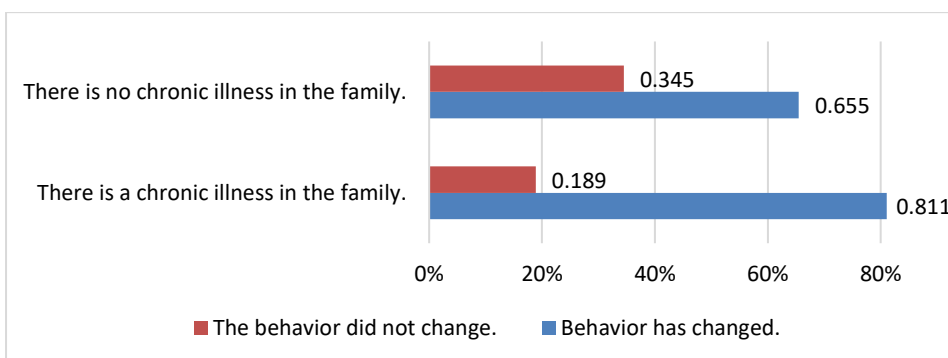
It can be seen that 25% of the respondents linked the services available to the environmentally conscious behaviour. This is in line with the literature which says that the infrastructure (eg. selective waste collection service available at home) has a great influence on the environmental behaviour besides the attitude of individuals (Akenji, 2014; Hofmeister-Tóth et al., 2011).

Information coming from experts were the second in the line, but it reached only 16% ratio. However, this factor has become the most authentic source of information. I explain two different results with this: the respondents accept the opinion of the experts, but they do not motivate them to real actions. Among the following studies and educational television programs were mentioned. The family stayed behind even them. In this context I can say that the family was not included among the most authentic sources. Despite that, 2/3 of the respondents mentioned it as a general source of information.

Significant correlation was found between behavioral change and the presence of chronic diseases within the family ($p = 0.009$). The relationship is shown in Figure 7.

Figure 7

Behavioral change and the relationship between chronic diseases in the family (N = 243)



It can be seen that families with chronic illnesses have mentioned behavioural changes in higher rates than those where there is no health problem. This is explained by the fact that a potential environmental illness can trigger an emotional effect in individuals.

CONCLUSIONS

It was found that more than 85% of the respondents claim to be environmentally conscious on the basis of subjective judgment. The main sources of information are the Internet, previous studies, educational television programs, recommendations of experts, opinion of friends and family members. Among these, experts are considered to be the most reliable source, but this is not the most popular source of

information. 75% of the respondents would like to receive more information in order to live a more environmentally conscious life.

The family encourages the respondents most towards a more environmentally conscious behaviour. In addition, there are external incentives such as tax increases or fees which have a significant influence on them. The motivating effect of different groups like friends, family, communities are also very important. Various environmental protection campaigns and chronic diseases in the family also play a role in promoting eco-activities. Over 80% of the respondents changed their behaviour towards an environmentally conscious one, which was mostly justified by the development of service infrastructure.

Based on my conclusions and results I propose the following recommendations in connection with the topic:

- It is necessary to continue providing information to individuals regarding proper and effective environmentally conscious behaviour. They should be told what to do in order to help and facilitate decision-making and reducing detected costs. It could be done by creating free information points and toll free numbers or mobile applications in order to provide modern, popular and widely available information sources to people.
- Experts must be behind different sources of information, in order to provide authentic information to consumers.
- Application of external incentives, regulations are unavoidable, and could be successful if used with attention.
- It would be worthwhile to take advantage of the influential role of the different groups and communities. These days widespread social media, the internet in general and the role of opinion leader people should become a more and more important incentive and tool to support environmental awareness in the future. With the support of experts this may lead to real reductions of environmental impact.
- The development of infrastructure and services that support environmentally conscious behaviour are extremely important. The consumer must be served, in this way convenience and comfort are less disturbed by the potential difficulties of environmental awareness. The problem of individuals must be solved: one cannot be environmentally conscious if conditions are not available for it.
- Alternative environmentally conscious options must be provided to the consumers that are more favourable than traditional behaviour.
- In summary, it can be seen from the literature and from my results that a complex approach is needed to increase the share of environmentally conscious behaviour. This can be achieved by the help of the government and community campaigns and initiatives taking into account the needs of different target groups.

ACKNOWLEDGEMENT

Due to space limitations the full questionnaire used in the survey is not published, but the material can be asked from the author.

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Corresponding author:

Margit WEISZ

Kaposvár University

Faculty of Economic Science

H-7400 Kaposvár, Guba Sándor utca 40.

e-mail: weisz.margit@ke.hu; weiszmargit@gmail.com