Green Marketing as a Tool Influencing Consumers’ Behavior: Slovak Case Study of Regional Mark Preference.

Ivan Murin\textsuperscript{a}, Iveta Marková\textsuperscript{b*}, Ján Zelený\textsuperscript{c}, Jana Jaďuďová\textsuperscript{d}

\textsuperscript{a,b,c,d} Matej Bel University, Faculty of Nature Sciences, Banská Bystrica, 749 40, Slovakia

Abstract

The article offers an overview of forms and strategies of marketing communication in consumers’ environment, the use of marketing communication with environmental elements and its research under Slovak conditions. In the strategy of the last years, Slovakia has adapted to European conditions of the commercial behaviour of consumers. Methods of mapping marketing tools in environmental management of companies and evaluating their effectiveness have been becoming actual management tools. Strategies of sustainability and environmental ethics are a common and acceptable marketing advantage on the market at present. The article communicated research of impact a green marketing by regional or green brand in Slovak regions Podpoľanie and Ponitrie. Gender, education level, monthly income and product price was main indicator for quantitative and marginally qualitative research data. Regional diversity is still evident in green marketing mainly in gender preference.

Keywords: consumers’ environment, marketing communication, regional preference, green brand, regional brand

* Corresponding author. Tel.: +0-421-484-8510; fax: +0-421-484-7000. 
E-mail address: iveta.markova@umb.sk

2212-5671 © 2015 The Authors. Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).
Peer-review under responsibility of the Organizing Committee of BEM2015

doi:10.1016/S2212-5671(15)01628-7
1. Introduction

The diversity of efficient communication prefigures his most significant advantage in the development of society. Besides the contact – interpersonal communication, also the number of the visual mark or symbol communication transmitted by means of marketing grows. However, there is no universal definition, which would contain all layers of the meaning of the terms “regional brand” or “green brand”. Article content will use the names mentioned in the nomenclature.

### Nomenclature

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELP</td>
<td>Environmental labelling of products</td>
</tr>
<tr>
<td>EMS</td>
<td>Environmental management system</td>
</tr>
<tr>
<td>EMAS</td>
<td>European Community Eco-management and audit schemes</td>
</tr>
<tr>
<td>EVP</td>
<td>Environmentally appropriate products</td>
</tr>
<tr>
<td>LCA</td>
<td>Life cycle assessment</td>
</tr>
<tr>
<td>SR</td>
<td>Slovak Republic</td>
</tr>
<tr>
<td>ŠKEČ</td>
<td>Statistic classification of economic activities</td>
</tr>
<tr>
<td>NUTS</td>
<td>Nomenclature des Unités Territoriales Statistiques</td>
</tr>
<tr>
<td>LAU</td>
<td>Local Administrative Units</td>
</tr>
</tbody>
</table>

As the title of the article may indicate, present-day application of knowledge of the theory of communication into the influencing of behaviour, including consumers’ behaviour, is very far from the pragmatic goal, which represented the end sale of the products. The complexity of the offer, consultancy, knowing, care for the customer also by ordinary agenda of the subject, which wants to succeed in the competition for his favour. The environmental and ecological issues, connected with provision of services, apply qualitative criteria by commercial communication with customers. Quality of life, sustainability, well-being, social inclusion and cohesion of communities, general benefit, intergenerational transmission of values, these are only a few from originally moral, but today already absolutely ordinary ethical criteria (Lejano & Stokols, 2013). The present-day marketing is trying to put the sum of ethical norms into brands which represent and symbolize quality, which they represent in their semantic meanings. In the cognitive level of the man environment and communication specially means the ability to act in contexts of sustainability of the habitat and habitus, as communities attach meaning to the in the long-term (Bourdieu, 1992). Environmental science tries to integrate them into the system of codes which would be understandable more easily, communicated successfully also by current communication methods (Seebohm, 2004). In environmental studies are terms like green marketing, environmental marketing, marketing for green sustainability appear frequently analyzed (Polonsky 1994, Ottman 1998 and others) with different using of practical marketing tool as is green mark. More discussion offered mixed academic and practical sites as common interest discussed group for application green marketing tools. Discussed topics as Green Labels – Mark of Sustainability or Marketing Tool? (Halligan, 2014) or A green mark for solved practice problems leads (https://discuss.codechef.com/questions/3011/a-green-mark-for-solved-practice-problems) to our research problem field monitoring of consumers behavior and green mark preference.

1.1. Environmental behaviour of consumers in mental representation

The objective of environmental marketing is to promote and popularize science knowledge in a way that they would result into responsible behaviour. Effective communication means to base the basic meanings into understandable visual codes so that tier meaning would be commonly understandable and easy to decode.

A several studies of Slovak consumers preferences showed (Lumnitzer 2005, Sedláková 2008, Kleinová & Kretter 2011) behavior of consumers is mainly diversified by gender and education level of respondents, certainly price and origin of product. The regional diversity and demographic impact was not appropriately explored in Slovak green marketing practices. In demographic researches studies (Slovenský štatistický úrad Slovenskej
The perception of the general environmental problems, most participants perceive green agenda in southern region of Slovakia. This understanding is in two mental representations of knowledge (Quinn & Holland, 2012). As first the general knowledge represented the *habitat*, that is perceived as the environment, in which the man or population lives. The second sum of knowledge is connected with healthy lifestyle and healthy environment. For characterizing of this model environmental perception is used the term *habitus* of the man is defined by Pierre Bourdieu (1992) as a complex of individual dispositions of the man, which allow him to perceive, think and act in a certain way.

The most describe awareness of environmental meaning the social-ecological model (see Fig.1), which examines the mutual relation of the man and the environment on various levels, i.e. on individual, group, organization, community and population levels (Lejano, Stokols, 2013).

![Fig. 1. Social-ecological model of the man relating to the environment (Bourdieu, 2000).](image)

The behavioural model, and consumers behaviour too, examines how the man behaves in changing environmental conditions. At present research of environmental behaviour can be used for the explanation of environmental preference (World Health Organisation, 2014).

### 1.2. EMS (EMAS) in Slovakia

The objective of the article is to present a view on application of eco-marketing by means of environmentally appropriate products (EVP) in the national economy context, based on synthesis and analysis. On the base of synthesis of theoretical literature we will evaluate the present position of enviro-marketing by statistic evaluation of the number of EMS and application of EMAS as a voluntary tool implemented in order to protect the environment, then we will evaluate the present-day labels of EVP and investigation of signification of the regional labeling of products.

Bulleted In consequence of gradual awareness of environmental problems, society’s attention is being concentrated on the creation and protection of the environment. Companies abroad and in Slovak Republic are aware of this fact and willingly start to implement the management of production quality and production management in favour of the environment, by means of implementation of EMS (EMAS). The system of environmental management is the most effective tool for the achievement of the priority goal in the area of industrial production and services – minimization of negative effects of production activity on particular elements of the environment (Bruyninckx, 2015, Domingos, Sakál, 2008). The elaborated statistics of the number of implemented EMAS systems on the base of data from annual reports on the state of the environment during 2003-2013 show a decrease of interest. Data from 2014 within the annual report on the state of the environment for 2015 have not been published. The depicted numbers of companies included in the scheme of the European Community Eco-management and audit schemes (EMAS) in accordance to the regulation of the European parliament and Council (EC) No. 1221/2009 on voluntary participation by organisations in a Community Eco-management and audit schemes (EMAS III) and on national level in accordance with the Act No. 351/2012 Coll. on environmental verification and registration of organisation in the EU-Scheme for environmental management are incomparably
lower. Meeting requirements for the implementation of the EMAS-Scheme is more demanding in comparison with requirements of ISO 14001, what is also reflected in the number of registrations on the national level (Fig. 2a). However, the graphic dependence of the numbers of organisations in EMS and EMAS systems has a comparable course, what refers to the change of the interest in presented systems.

In 2013, 44 new organisations came into existence in the SR with implemented and certified EMS (Fig. 2b), which has led to the total of registered organisations with certified EMS in accordance with ISO 14001 of 1 292 (Report on the state of environment, 2013) since 1996. Within the voluntary registration of companies in the SR (www.vsetkyfirmy.sk), there are 977 791 companies at present. In consideration of facts of registering companies in the EMS-system in 2013, 44 companies represent 0,0045 % of companies participated in the certification, and 0,1321 % from the total of registered companies.

![Fig. 2a. EMS-certification in accordance with ISO 14001 – development of the increase of number of organisations with certified EMS and participation of organisations in Eco-Management and Audit Scheme (EMAS III).](image)

![Fig. 2b. EMS-Certification according to ŠKEČ (statistic classification of economic activities) – Structure of annual increase for 2013 and 2012. Legend: S Another services, P education, N Administrative and support services, M Expert, scientific and technical activities, J Information and communication, I Cleaning and food services H Transportation and storing, G Wholesale and retail, repair..., E Water supply, cleaning and waste and waste disposal services, C Construction, Manufacturing, B Mining and quarrying, A Agriculture, forestry, fishery.](image)

In the time of addressing environmental problems it is clear that a “clean” marketing concept seems to be contradictory but still necessary. Data presented above point at very low percentage of companies paying attention to this issue. There are several reasons. There is a conflict between short-terms wishes and long-term well-being of the consumer (Domingos, Sakál, 2008). In order to join the short-term wish (social view) and long-term well-being of the consumer (need to protect the environment), an environmentally oriented marketing concept is coming to existence (Domingos, Sakál, 2008, Hemantha, 2012). The above mentioned issue is so becoming evident in several titles like eco-marketing, enviro-marketing, green marketing.

Chovanová, Rusko (2008) describe the application of green marketing at the beginning of 1980s by the occurrence of so called environmentally appropriate or acceptable products on the market. It started with the production of products which are environmentally safer, recyclable and bio-degradable packages, by more effective check of pollution and more energy-saving operation conditions.

### 1.3. Environmental labelling of products (ELP)

Breaking through of producers via application of competitive advantages bound to ecology is becoming more evident. This especially concerns production of eco-friendly products with particular labelling (Table 1). Consumers who are concerned about issues like global warming, growing prices of oil, sustainability and other effects on natural resources, have been deciding on buying products regarding their effects on the environment. The results of
their reflection are thousands of marketing statements, which companies use to praise ecological properties of their products and services.

Environmental labelling of products in the Slovak Republic is one of voluntary tools of environmental policy and has been carried out since 1997, when the National Program of Environmental Evaluation and Labelling of Products (NPEHOV) has been declared by the minister of environment. At present, there are more systems and schemes of environmental labelling at the market, with their own specifics and awarded by particular organizations (Table 1). Within the EU there is a number of labels including national labels, the overview is presented by Rusko, Kolár (2010).

### Table 1. Overview of logos of eco-products.

<table>
<thead>
<tr>
<th>Label type</th>
<th>Standard</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environ-mental label of type II</td>
<td>ISO 14021:1999 Declarations on enviro properties of products are formulated by producers</td>
<td>4 organizations with confirmed validity in SR Verification carried out by Slovak Environment Agency and the Centre of Waste Industry and EM</td>
</tr>
<tr>
<td>Environ-mental label of type III</td>
<td>ISO 14025:1999 and ISO 14025: 2006 Environmental labels and declarations -- Type III environmental declarations -- Principles and procedures It always has to be verified by a third party, declarations on enviro-properties of products are formulated by producers on the base of LCA in compliance with requirements of ISO norms 14040</td>
<td>14040</td>
</tr>
<tr>
<td>Environ-mental labels for one sector, awarded by public institutions</td>
<td>Energy Star – label for energy saving office supplies (computers, monitors, copying machines, printers, fax etc.) Organic agriculture Act of the National Council of the Slovak Republic No. 189/2009 on organic agricultural production Energetic labelling used in the EU evaluates products for the household on the base of their energy saving</td>
<td>Defined by the Regulation of the European Parliament and Council (EC) No. 106/2008 Defined by the Regulation of the European Council (EEC) No. 2092/91 on organic production of agricultural products and indication referring thereto on agricultural products and foodstuffs Defined by the directive 92/75/EEC of the Council</td>
</tr>
<tr>
<td>Private environ-mental labels</td>
<td>Logo of inspection organisation Naturalis Sk, s.r.o.</td>
<td></td>
</tr>
</tbody>
</table>

Within the project of increasing the awareness of eco-marketing, students of the study programme of environmental management have been addressed in order to answer question about basic principles of the application of creation of principles of eco-vouchers (to subsidize consumption, increase consumers’ awareness) and eco-friendly products. Dominant awareness was drawn to possible modification of technologies (observing increasing waste) and energetic and material inputs, influence of distribution systems, layout of the product and style, where experts’ affirmations to pay the vital attention to the development of environmentally proper technologies from renewable sources of energies and to produce “eco-friendly” products in order to support the sustainable development.
2. Material and Methods

Presently, in the Slovak Republic exist the regional labeling of Podpoľanie, Ponitrie and Hont. The first certification and award of ELP was held in the first half of 2013. The survey was conducted through a questionnaire which consisted of closing 24 multi-choices.

The two regional brands Podpoľanie and Ponitrie were subject of survey of regional marking as part of eco-labelling. Our research samples were consumers from Ponitrie and Podpoľanie region. The survey was realized by questionnaire, which consists of closing twenty-four questions. It was distributed in printing and email and contact form (published on the websites of organizations dealing with regional labeling, portals out and sending to email addresses). The survey was conducted in December 2014 – February 2015 for Podpoľanie region and participants were 259 respondents (consumers). In region Ponitrie the survey was realized in March 2104 - April 2015 and participants were 273 respondents.

The questionnaire was evaluated by chi-square test in IBM SPSS Statistics 19th. The given hypotheses: H1 - Connecting with regional brand (Ponitrie / Podpoľanie) in trade depends on the gender of the respondent. H2 - Buying of regional products depends on the value of the average monthly income respondents. H3 - A connecting with the brands that are the product of SR awarding depends on the highest educational attainment of respondents. The field data we put to contingency table type \( c \times k \). Homogeneity required probabilistic divide to A and B in accordance with \( \chi^2 \) criterion (Hendl, 2006, 312).

3. Results and Discussions

The national environmental label of EVPs is awarded by the Ministry of Environment of the Slovak Republic to products or services which meet special conditions in accordance with the Notice of the Ministry of Environment of the Slovak Republic for particular groups of products. Since 1997 have been created national environmental criteria for 39 groups of products.

In the year 2010, one of the years with rich results, especially bedclothes, toilet paper and paper tissues, painting substances were awarded by the national label, and 146 products in 10 holders (with 10 licences) in this year (Baďurová, 2010). The largest group of awarded products in the last years is group of sorbents.

Another important aspect of the policy of the creation of a product in order to support sales and to highlight good qualities of the product is environmental packaging of products. The package is also a toll for mediating the idea of environmental protection (Domingos, Sakál, 2008). Also packaging giveaways, especially eco-bags (applied in large stores like TESCO), are becoming more evident.

The results of the questionnaire survey were evaluated on based of the distribution of respondents by sex, age (Table 2), educational attainment (Table 3) and of monthly income (Table 4) in percentage terms.

<table>
<thead>
<tr>
<th>Region</th>
<th>Gender</th>
<th>Age</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
<td>18-25</td>
<td>26-61</td>
<td>More 62</td>
</tr>
<tr>
<td>Podpoľanie</td>
<td>53</td>
<td>47</td>
<td>17</td>
<td>62</td>
<td>21</td>
</tr>
<tr>
<td>Ponitrie</td>
<td>70</td>
<td>36</td>
<td>54</td>
<td>36</td>
<td>10</td>
</tr>
</tbody>
</table>

Based on the results knowledge the dependent of regional brands (Podpoľanie, Ponitrie) did not confirmed in the both cases. In the case of the gender of the respondents (p-value\(_{Podpoľanie} = 0.02\), Chi-square\(_{Podpoľanie} = 7.9\); p-value\(_{Ponitrie} = 0.5\), Chi-square\(_{Ponitrie} = 1.58\)) is hypothesis unconfirmed.

Hypothesis H1 lead up to gender dependence in regional brand preference at level significance 5% is proved only in Podpoľanie region \((\chi^2=7.9>\chi^2_{0.05(2)}=5.9)\). This indicate that women are more prioritized for green marking. With comparison of this in Ponitrie region \((\chi^2=1.46<\chi^2_{0.05(2)}=5.9)\) not indicate gender preference.

This regional dissimilarity we examined by qualitative interviews where was expressed by participants differentiation in consumer activities. In Podpoľanie, as a more traditional region, are still common shopping role of women. Ponitrie region with higher level of industrial and urban environments are gender roles including consumers behaviour more diversified.
Podpoľanie is a rural region with developed agriculture and limited shopping options, with the absence of universities, the nearest is in Zvolen (about 30 km). Ponitrie is a cultural and social center of southwestern Slovakia, with developed services. This fact was reflected in the age and education of respondents (Table 3).

<table>
<thead>
<tr>
<th>Region</th>
<th>Educational attainment</th>
<th>p-value</th>
<th>Chi-square</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Basic</td>
<td>Secondary</td>
<td>Higher</td>
</tr>
<tr>
<td>Podpoľanie</td>
<td>12</td>
<td>63</td>
<td>20</td>
</tr>
<tr>
<td>Ponitrie</td>
<td>2</td>
<td>50</td>
<td>45</td>
</tr>
</tbody>
</table>

Likewise, we confirmed no correlation between knowledge of regional brands and highest level of education (p-value$_{Podpoľanie}$ = 0.12, Chi-square$_{Podpoľanie}$ = 10.11; p-value$_{Ponitrie}$ = 0.35, Ch-square$_{Ponitrie}$ = 6.71).

Table 3. Dependencies between the consumers of educational attainment in percentage terms in various regions and the knowledge of labeling products.

The same finding is found in the work Chalupová, Prokop, Rojík (2012), who investigated the knowledge of regional food brands in the Shire Highlands in the Czech Republic. In both we failed to demonstrate a relationship between shopping regional products and the amount of monthly income respondents (p-value$_{Podpoľanie}$ = 0.11 Chi-square$_{Podpoľanie}$ = 6.68; p-value$_{Ponitrie}$ = 0.09 Chi-square$_{Ponitrie}$ = 13.61).

Table 4. The based of the distribution of respondents by monthly income.

<table>
<thead>
<tr>
<th>Region</th>
<th>to 350 EUR</th>
<th>351-550 EUR</th>
<th>551-750 EUR</th>
<th>751-950 EUR</th>
<th>More 951 EUR</th>
<th>p-value</th>
<th>Chi-square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Podpoľanie</td>
<td>number</td>
<td>112</td>
<td>83</td>
<td>45</td>
<td>13</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>yes</td>
<td>88,65</td>
<td>65,69</td>
<td>35,62</td>
<td>10,29</td>
<td>4,75</td>
<td>0.11</td>
</tr>
<tr>
<td></td>
<td>no</td>
<td>6,0</td>
<td>4,49</td>
<td>2,43</td>
<td>0,70</td>
<td>0,32</td>
<td></td>
</tr>
<tr>
<td></td>
<td>don’t know</td>
<td>17,30</td>
<td>12,82</td>
<td>6,95</td>
<td>2,01</td>
<td>0,93</td>
<td></td>
</tr>
<tr>
<td>Ponitrie</td>
<td>number</td>
<td>130</td>
<td>57</td>
<td>45</td>
<td>18</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td></td>
<td>yes</td>
<td>98,10</td>
<td>43,01</td>
<td>33,96</td>
<td>13,58</td>
<td>17,36</td>
<td>0.09</td>
</tr>
<tr>
<td></td>
<td>no</td>
<td>8,10</td>
<td>3,55</td>
<td>2,80</td>
<td>1,12</td>
<td>1,43</td>
<td></td>
</tr>
<tr>
<td></td>
<td>don’t know</td>
<td>23,81</td>
<td>10,44</td>
<td>8,24</td>
<td>3,30</td>
<td>4,21</td>
<td></td>
</tr>
</tbody>
</table>

Likewise, we confirmed no correlation between knowledge of regional brands and highest level of education (p-value$_{Podpoľanie}$ = 0.12, Chi-square$_{Podpoľanie}$ = 10.11; p-value$_{Ponitrie}$ = 0.35, Ch-square$_{Ponitrie}$ = 6.71).

Table 3. Dependencies between the consumers of educational attainment in percentage terms in various regions and the knowledge of labeling products.

The same finding is found in the work Chalupová, Prokop, Rojík (2012), who investigated the knowledge of regional food brands in the Shire Highlands in the Czech Republic. In both we failed to demonstrate a relationship between shopping regional products and the amount of monthly income respondents (p-value$_{Podpoľanie}$ = 0.11 Chi-square$_{Podpoľanie}$ = 6.68; p-value$_{Ponitrie}$ = 0.09 Chi-square$_{Ponitrie}$ = 13.61).

4. Conclusion

Fundamental green marketing strategies local/regional production in correspondence with accessible price is still significant phenomenon that we recognized in our research. In common shopping are relatively stable included products with green label. Regional diversity in consumers behaviour is phenomenon not only Central/East Europe countries, some dissimilarity we can recognize f.e. in North/South regions of SR. Level of education is important in green marketing enlightenment, where information are effective in secondary and higher educated members of society. Most disputable is indicate gender prioritization of consumer behaviour with connection to changing of roles in shopping. In numerous Slovak regions is still characteristic man/woman determination of shopping activities. As our research confirmed level of industrialism and urbanism level out this phenomenon.

Europe has still been facing a number of persisting and growing challenges concerning the environment. Key attention still remains in models of production and consumption, which are the basic cause of environmental problems. The SR has a very low number of awarded EVP labels and implemented systems of EMS and EMAS. The challenge is to increase the awareness of consumers not only about environmental problems but also about the existence of possible solutions and existence of enviro-label, which guarantees the existence of the eco-product, which has been acquired by environmental way, i.e. systematically build eco-vouchers. Field evidence of impact green marketing tools can be one of significant indicator of qualitative change.
Acknowledgements

This work was supported by the Scientific Grant Agency of the Ministry of Education, science, re-search and sport of the Slovak Republic and the Slovak Academy of Sciences project no. VEGA 1-0547-15.

References


Bzdúšek, I., Vasiľová, K., 2015. Green marketing as a new source of competitive advantage in business. [on-line] [cit. 2015-04-22] Internet: http://www.academia.edu/1197347/Zelen%C3%BD-marketing_ako_nov%C3%BD_zdroj_konkuren%C4%8Dnej_v%C3%BDhody_v_podniku.


Trnava, pp. 40-50.

ISO 14020: 2000 Environmental labels and declarations –General principles (STN ISO 14020)

ISO 14021:1999 Environmental labels and declarations -Self-declared environmental claims (Type II environmental labeling)

ISO 14024: 1999 Environmental labels and declarations -Type I environmental labeling - Principles and procedures.


March 2011.


Rusko, M., Kolar, V. Environmental labels and declarations. Journal Real Estate and Housing, 1, 51-60.


This work was supported by the Scientific Grant Agency of the Ministry of Education, science, re-search and sport of the Slovak Republic and the Slovak Academy of Sciences project no. VEGA 1-0547-15.