

## Study of green marketing principles and their implementation in the selected Slovak companies

**Anna Krizanova**, Department of Economics, Faculty of Operations and Economics of Transport and Communications, University of Zilina, Univerzitna 1, 010 26 Zilina, Slovakia.

**Lubica Gajanova\***, Department of Economics, Faculty of Operations and Economics of Transport and Communications, University of Zilina, Univerzitna 1, 010 26 Zilina, Slovakia.

**Margareta Nadanyiova**, Department of Economics, Faculty of Operations and Economics of Transport and Communications, University of Zilina, Univerzitna 1, 010 26 Zilina, Slovakia.

**Katarina Kramarova**, Department of Economics, Faculty of Operations and Economics of Transport and Communications, University of Zilina, Univerzitna 1, 010 26 Zilina, Slovakia.

### Suggested Citation:

Krizanova,A., Gajanova, L., Nadanyiova, M. & Kramarova, K. (2016). Study of green marketing principles and their implementation in the selected Slovak companies. *Global Journal of Business, Economics and Management: Current Issues*. 6(2), 78-85.

Received July 10, 2016; revised September 3, 2016; accepted November 12, 2016;

Selection and peer review under responsibility of Prof. Dr. Andreea Iluzia IACOB, Bucharest Academy of Economic Studies, Romania.

©2016 SciencePark Research, Organization & Counseling. All rights reserved.

---

### Abstract

The green marketing includes more than just a simple building of corporate image. It becomes a modern mean of the enforcement of actual environmental trends to a broad spectrum of business activities. The field of action of green marketing tools is relatively extensive, starting with the protection of environment, production and sale of products and services with ecological conditions and requirements, through the final consumption of environmentally friendly products, which affects the quality of life and health of the whole society. The paper in brief presents the results of the marketing survey that was focused on finding how chosen Slovak companies applied principles of green marketing and used green marketing tools within their business activities, if ever. Nowadays, concepts such as green marketing, green business and ecological product appear more frequently particularly with regard to communication of companies. For these reasons, the aim of the survey was to determine the extent to which the principles of green marketing are implemented in selected business entities in the Slovak Republic.

Keywords: green marketing, environmental management system, tools of green communication mix, advertising, public relation

---

\* ADDRESS FOR CORRESPONDENCE: **Lubica Gajanova**, Department of Economics, Faculty of Operations and Economics of Transport and Communications, University of Zilina, Univerzitna 1, 010 26 Zilina, Slovakia.  
E-mail address: [lubica.gajanova@fpedas.uniza.sk](mailto:lubica.gajanova@fpedas.uniza.sk) / Tel.: +421-41-513-3247

## 1. Introduction

In recent years, issues related to global warming, carbon emissions, use of natural resources and sustainable development come into the forefront of the governments, international corporations, businesses and each individual. Environmental changes pose to the business, but also the social sphere the risk of rising prices of raw materials and water or an increase in charges for emissions and waste disposal (Krizanova, Majerova & Zvarikova, 2013). Green marketing is seen as a full orientation of all business activities on the environmental aspects with the relationship to corporate social responsibility (Otmann, 2011; Krizanova & Rypakova, 2013; Musova, 2012). The principles of green marketing allow to change the business attitudes and values towards the formation of such products that meet consumers' needs, while being friendly to the environment (Majerova, 2015). There is evidence that a sense of responsibility towards the environmental problems has a growing tendency among consumers (Masarova & Stefanikova, 2014). It is therefore assumed that companies that reduce their environmental impact will have a competitive advantage in the near future (Tokarcikova, Bartosova, Kucharcikova & Durisova, 2014).

## 2. The survey related to the rate of implementing the principles of green marketing in selected business entities in the Slovak Republic

Nowadays, concepts such as green marketing, green business and ecological product appear more frequently particularly with regard to communication of companies. For these reasons, the aim of the survey was to determine the extent to which the principles of green marketing are implemented in selected business entities in the Slovak Republic. The object of the survey was green marketing tools used by the addressed businesses.

The survey was focused on undertakings in the Slovak Republic, which were not limited in size or business activity. Businesses were broken into four classes within the size. The number of the employees was a criterion of classification within a particular class. We assumed that large companies are focused on the use of green marketing resources on a larger scale. The breakdown of companies was based on size classification used in the European Union. The first class consists of micro-enterprises with a maximum of 9 employees. The small enterprises represent second class employee not less than 10 and not more than 49 employees. Medium-sized enterprises with a scale from 50 to 249 of staff are the third class. Lastly, the fourth class consists of large enterprises. It has lower limit of the interval 250 and unlimited upper limit of the number of employees. Number of surveyed businesses was 100.

The survey was conducted in 2013 in five weeks. Querying method was selected for the collection of primary data. The rate of implementation of principles of green marketing in the Slovak Republic was subsequently determined using a questionnaire.

100 businesses were contacted via email and the return rate of electronic questionnaires was 50%. 10 companies were interviewed in person and questionnaires were filled out based on a personal interview. The total number of questionnaires for processing was 60. The entities were represented by 43% of manufacturing companies, 40% of service companies, and other 17% was a combination thereof. Among the addressed companies were, for example, Lidl Slovenska republika, v.o.s., Tesco Stores SR, a.s., Kia Motors Sales Slovensko, s.r.o., Volkswagen Slovakia, a.s., Incon spol. s.r.o., Agrichem Ximix, s.r.o., Slovnaft, a.s., and others.

### 2.1. The general part of survey

The introductory part of the questionnaire contained questions regarding the number of employees in the surveyed companies, their geographical exposure, industry, and business specific type

depending on the result of their activities. Those questions have served mainly to create a universal characteristics and structure of the analysed entities.

57% of surveyed entities operate only in the Slovak Republic, 36% in the European Union and 7% are active in several countries on different continents. Small businesses accounted for the largest representation, in the amount 36% of all enterprises. Large and micro enterprises were the least. Each of them accounted for 17% share. Medium-sized enterprises accounted for 30% of total respondents. The dependence that the size of the company affects the factor of territorial activity was confirmed. Micro-enterprises operate only in the Slovak Republic, small and medium-sized companies in the European Union, and large companies operate in different countries and continents as well. Service companies and manufacturing companies were represented by approximately the same share of 42%, the rest was a combination thereof. Specifically, these were undertakings engaged in the production and sales of dairy food products, companies focused on engineering, construction, textile industry, trade, manufacturing and sale of plastics. Most surveyed companies were in the machinery industry (in number 14), which accounted for 23%.

## *2.2. The rate of EMS implementation, marketing costs and knowledge of green marketing*

Another part of the questionnaire was designed to examine the degree of implementation of the Environmental Management System (EMS), the cost of marketing in the enterprise, and knowledge of green marketing.

In examining the economic result, it was found that the highest value of it was reached by large companies that do business in the automotive industry. The question was included in the survey, because it is assumed that the level of the indicator affects the amount of the marketing cost. The analysed entities performed the marketing activities with related costs regardless of achieved income. The analysis showed that the share of costs spent on marketing was not influenced by company size as well. The percentage of those costs was even higher at an average of 4% in small companies than in medium-sized enterprises. The greatest value of the share was reached by large manufacturing companies with a focus on the automotive industry.

We have assumed that companies apply the principles of green marketing although they do not have integrated it into the philosophy and mission. To confirm or refute this assumption the surveyed undertakings were asked about the specific tools which implement the principles of green marketing. In analysing of formulated philosophies in surveyed companies it was indicated that each of them has specified its environmental orientation and objectives in this area. Specifically, the companies have described environmental aspects in various stages of production and applied solutions to prevent deterioration and to improve the negative impacts on the environment.

From a comprehensive view, we can say that the concept of green marketing is relatively known in the business entities in the Slovak Republic because up to 80% of the analysed companies knows it.

10% of medium-sized engineering company, 3% of the companies which process plastics, 3% of companies which manufacture the automobile components and 3% of micro-enterprises in the field of agriculture is planning to implement the EMS. Other companies do not have implemented EMS and are not planning it in the short term. Enterprises are obliged to comply with legal and other requirements in building of EMS, and if an independent audit confirms the efficacy of the system and the achievement of the requirements, they will be certified. Thus the company can demonstrably confirm the systematic management of its environmental performance. It was also one of the main grounds for the inclusion of that question in the questionnaire. Overall, it is clear that most of the analysed company does not have implemented EMS and have no plans to implement it, it is up to 53% of small businesses.

### 2.3. Marketing mix tools in green marketing

The third part of the questionnaire focused on the implemented tools in the marketing mix of green marketing. The use of individual tools in products, operation of the company, transport, communications, and price has gradually explored and evaluated. The result is their overview and categorization from the various aspects.

We have found that 44% of the analysed companies do not use any eco-label. This may be caused by insufficient knowledge of different types of environmental labels. Therefore, this data is from an overall perspective obviously overestimated. Only 10% of surveyed companies implement environmental labelling product according to the Act, namely four service companies, no manufacturing companies and combinations thereof companies. Most responses (33%) was related to the eco-labelling of packaging technology. However, the use of this type of labelling is becoming a necessity in today's regulatory requirements regarding waste management of enterprises.

We have also examined whether the businesses use technology to save energy, resources and protect the environment and human health. These technologies were summarized into four categories:

- Saving energy (technology).
- Device (technology) enabling the recycling or extracting secondary raw materials from waste.
- Device (technology) enabling the use of waste as an additional source of energy in meeting environmental requirements.
- Device (technology) allowing dispose of waste and harmful substances in a way which does not harm the environment and human health over the legally imposed rate.

Enterprises also have the option to choose multiple options at the same time. The survey showed that 48% of businesses marked the first option and 83% in combination with other options. Conversely, the least of entities selected from the third and fourth variants. These variants were consistently identified by 17%. Only 9% of companies uses all of the available types of device and technology. It was just large companies. At least three of the variants was mentioned again by large and medium-sized entities. The analysis confirmed the assumption that large and medium enterprises implement a number of devices and technologies. Saving lamps, sewage treatment plants, power saving modes on equipment, recycle and filter units, sources of heating, waste separation were the most used devices. Among the unique mechanisms which have been mentioned in response belongs waste treatment, which is used for animal feed, equipment for the production of moulded briquettes from sawdust and dry separator of element in paint shop. Large companies focused on the automotive industry operate modern laboratories that develop technologies with the lowest negative impact on the environment.

With regard to nature of the raw materials and materials according to their origin and characteristics, it was found that none of the analysed companies use environmental raw materials which have specific characteristics. The use of secondary raw materials in the production prevalent in 44% of subjects is positive in terms of the principles of green marketing. However, there is possibility that explains the given fact. And it is the tendency of companies which tend to promote this kind of information caused by the word "recycled" in the response. Approximately the same proportion of businesses (43%) uses primary and secondary raw materials and materials in the same proportion, only 13% of respondents use only the primary raw materials.

In the survey, we have also investigated the relationship between the business area and diversity of type of used transport. Follows from the analysis it is clear that a wider business area really means the use of multiple types of transport (road, rail, water, air, pipelines). Entities operating in several countries and on several continents use at least three variants of the offered transport and these ones

as the only ones marked air transport. Other businesses chose only two options and their business area was limited up to the European Union. 3% of entities operating in the Slovak Republic marked combination of transportation via pipelines. Their business activity is in the chemical industry. Electrified rail transport is preferred while taking into account the principles of green marketing. It is on the middle position among all other types in terms of speed and cost per ton-kilometre as well. On the negative side there is less flexible routings and difficult handling of products and materials that require unique technical devices and built-up areas. This is due to the fact that the railway network in most cases does not allow access to the actual place of destination and the transfer requires the unloading on the trucks. Further analysis therefore examined the percentage rate of the combination with another offered option of all types of transport. 27% of respondents use railway along the road transport. 10% of enterprises used it in combination with other transport types and up to 63% companies do not use the rail transport in the distribution of a material. Due to an observed fact it is not a positive result.

Some of the questions of the questionnaire was dedicated to communication mix tools. When considering which forms of advertising are preferred by surveyed enterprises there was prove no correlation between company size and preferred form of advertising. A detailed overview of the structure of enterprises by size and various forms of advertising they use is shown in Table 1.

Table 1. Structure of enterprises by size and used forms of advertising [%]

Forms of advertising	Structure of enterprises by size				Total
	micro	small	medium	large	
On television, on radio, on web, in periodic, posters, billboards, leaflets	3	3	-	10	16
On radio, on web	-	7	-	-	7
On radio, on web, in periodic	-	3	-	-	3
On radio, on web, in periodic, posters, billboards, leaflets	3	-	7	-	10
On web, in periodic	-	13	-	-	13
On web, posters, billboards, leaflets	8	7	13	-	28
On web, in periodic, posters, billboards, leaflets	-	-	10	7	17
In periodic	3	-	-	-	3
Posters, billboards, leaflets	-	3	-	-	3
Total	17	36	30	17	100

16% of companies indicated all possibilities on offer, of which 10% were large, 3% small, and 3% micro-enterprises. Three variants (on television, on radio, on web) are among the preferred forms in the green marketing as well. 7% of companies chose at least one of them without combination with others. In combination with the remaining options, the number of subjects increased to 87% of the total and the remaining 6% of companies does not apply preferred forms of advertising in green marketing.

In examining the use of direct marketing, we found that 33% of companies do not use it. Most of the respondents chose the internet. It is used by 47% of analysed subjects, only 3% of the companies reach the customers by mail, the other 17% use the phone. In terms of green marketing more than half of the companies (64%) prefer options that cause less damage to the environment in the long term.

67% of surveyed entities use Public Relations (PR) as a communication tool. PR is generally most used by small businesses, amounting to 36%. Participation in conferences, events and contributions in the media with environmental orientation was observed in 19% of all subjects that use the PR. Besides these companies, there are also other activities, including meetings with customers, training of all

employees in the fields of environmental protection and the impact of their activities on the environment in order to increase their environmental knowledge.

As regards the use of sponsoring by surveyed undertakings we have found that the environment friendly projects are supported by only 10% of the total number of subjects, 7% of large enterprises and 3% of medium-sized enterprises. Up to 43% of subjects do not use the sponsorship at all. It is probably caused by the current economic and financial situation in the Slovak Republic.

In addition to a comprehensive view of communication mix it was carried out an analysis that focused only on tools used in green marketing and accordingly we have divided all enterprises into three groups that are shown in Figure 1.

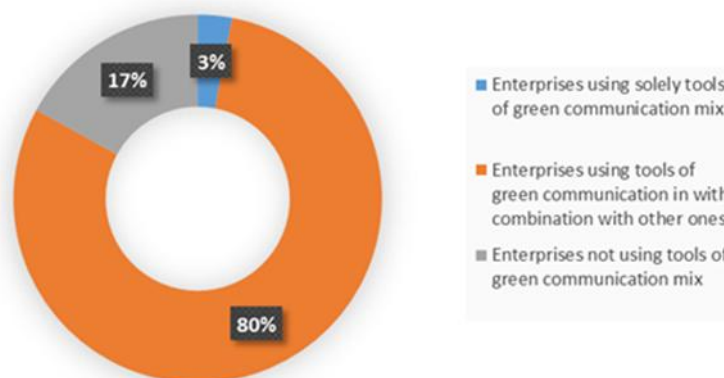


Figure 2. Structure of enterprises by using tools of green communication mix

- The first group - it includes businesses that use only tools of "green" communication mix. It is mainly focus on the web, television, radio advertising, and reaching customers via the internet and telephone.
- The second group – it includes companies that use these tools in combination with others.
- The third group – it consists of entities that do not use "green" communication tools at all.

Up to 80% of the companies analysed apply the principles of green marketing as part of their communication mix. Only 3% of enterprises use exclusively "green" tools of marketing communications and other 17% does not use them in communication.

At the end of the survey we examined how are the cost related to environment activities compensate in research subjects. The companies responded in what they find the cost balancing of EMS implementation, device for environmental protection and so on. Enterprises most frequently mentioned as a response the saving resources and energy costs, the inclusion in product prices, image and positive relationships building, good added value and increase sales. However up to 30% of companies responded that there was no desired compensation and the awaited reaction of customers was failed. Despite the interest to implement other saving resources and environment protecting technologies, they currently have not the adequate funds for this purpose.

### **3. Proposals and measures to implement the principles of green marketing in companies the Slovak Republic**

Based on the research carried out aimed at detecting the extent of implementation of the green marketing principles in selected business entities and by analyzing it is possible to establish the certain proposals and measures of a general nature.

In the absence of internal resources needed to finance saving resources technology and device, increasing level of environmental protection or education of staff in the fields of environmental protection with a view to increasing the environmental awareness it is possible to use the public funds. State budget of the Slovak Republic in the current situation does not have required funds available for grant in this field and from this point of view, businesses could then use foreign sources. The second programming period of the financial mechanisms provided by Norway and EEA countries to the Slovak Republic takes place between 2009 and 2014. Just during this period 9 environmental focused areas that are especially oriented toward the green industry innovation and green projects will be encourage.

Other opportunities that allowed companies to apply for grants for the installation and upgrading of facilities to reduce emissions of air pollutants was the support of projects under the Operational Programme „Životné prostredie (The environment)“, which lasted until the end of 2013. For the next programming period 2014 - 2020 the area of environment is covered by a wide range of activities that are included in the funding priorities "Trvalo udržateľné a efektívne využívanie prírodných zdrojov (Sustainable and efficient use of natural resources)", where the projects aimed at reducing carbon emissions or to improve the use of resources will be supported.

When creating such projects and for other innovation activities aiming at increasing the protection of environment or saving resources and energy, businesses can cooperate with different departments of universities and colleges in Slovakia. For example, the office for cooperation with industry of the University of Žilina was established with the aim of developing cooperation between businesses and university, and in 2001 its activities are connected with the activities of the Science and Technology Park in Žilina.

Despite the fact that green marketing principles are applied in businesses in the Slovak Republic it is needed a more comprehensive approach to their use. It is very important to implement these principles into business philosophy and strategy. Environmental aspects must be monitored throughout the life cycle of the product and in many activities of the company. Already in the process of research and product development there is a need to focus on materials and technologies, the packaging technology and the future possibility of recycling. In this regard, it is appropriate to implement the method for evaluation of product lifecycle alternative.

It is necessary to focus attention on the complete marketing mix. Enable enterprises to identify marketing mix as "green", it is required to use the widest range of tools through which environmental marketing objectives will be achieved. All these areas also create opportunities for competitive advantage that enables enterprises to get a new pro environmental oriented customer segments. In order for a reaction on the implementation of the green marketing and its tools by the customers and their adaptation of purchasing behavior in the desired direction, there is need to educate them.

Especially the sphere of advertising and PR offers a good opportunity to raise environmental awareness among all consumers and helps to change public attitudes. It is necessary to clearly explain the information about environmental product so that the customers will understand it as well as they will identify with it. With increasing education within the issue the segment of "green" cognitive potential customers will grow.

In marketing communications, there are many eventualities as the company can generate positive visibility through an environmentally sound manner, such as use of electronic media, communicate via the internet, and send e-invoices and many others. For presentation of environmental performance, it

can be used appropriate activities conducted on Earth Day (April 22), Day without cars (22 September) or Earth Hour, which is an hour without the electricity.

The companies have an opportunity to cooperation with scientists and also to start using environmentally friendly packaging technologies that are currently without competition. The researchers of Slovak university of technology in Bratislava in collaboration with Polymer Institute of the Slovak Academy of Sciences have developed biodegradable polymers that can biodegrade, what other plastics are unable to. Patent protection of this material is very costly, so companies have the opportunity to support it within the green sponsorship.

## Acknowledgements

This contribution is a partial output of scientific grant VEGA n. 1/0024/15 THE FUNDAMENTAL RESEARCH PERCEPTION OF CORPORATE SOCIAL RESPONSIBILITY AS A VALUE FOR CUSTOMER.

## References

- Krizanova, A., Majerova, J., & Zvarikova, K. (2013). Green marketing as a tool of achieving competitive advantage in automotive transport, *Transport means 2013: proceedings of the 17th international conference*. Kaunas, Lithuania: Kaunas.
- Krizanova, A., & Rypakova, M. (2013). Zeleny marketing ako zdroj konkurencnej vyhody a prilezitost pre inovaciu a udrzatelny rozvoj v chemickom priemysle. *MANEKO, Manazment a ekonomika podniku*, 5(2), 285-296.
- Majrerova, J. (2015). Analysis of Slovak Consumer's Perception of the Green Marketing Activities. *Procedia Economics and finance*, 26, 553-560.
- Masarova, G., & Stefanikova, L. (2014). Moderne nastroje komunikacneho mixu vyuzivane v podnikoch poskytujucich stravovacie sluzby, *Otvoreny inovacny proces: podpora sirenia vedomosti a vytvarania hodnot v podnikatelskych subjektoch: zbornik vedeckych prac z vedeckého grantu VEGA c. 1/0900/12*. Slovakia: Trnava.
- Musova, Z. (2012). Environmental aspects of social marketing. *Ekonomicko-manazerske spektrum*, 6 (2), 57-65.
- Ottman, J. (2011). *The new rules of green marketing: Strategies, tools and inspiration for sustainable branding*. San Francisco: Berrett-Koehler Publishers.
- Tokarcikova, E., Bartosova, V., Kucharcikova, A., & Durisova, M. (2014). Automotive Company's Social Responsibility in Slovakia. 4th International-Business-Information-Management-Association Conference.