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Suggestion of green customer segmentation in Slovakia

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Abstract

One of the most important goals in a business is catch the trend and meet the customer's need. Marketing segmentation, as first step of the STP process, is significant to reach this goal. However, the environment is currently followed by technical and technological innovation, the state of the natural environment is alarming. Since that fact, there is a place for new segmentation related to environmental sensitiveness, the interest and motivation for purchasing green products. In Slovakia, there is no official segmentation. This paper is ambitious to propose it based on questionnaire survey that was randomly mailed to inhabitants in Slovakia. The results are compared with Hofstede's cultural dimensions. Therefore, it explores the relation between results of questionnaire and official Hofstede's score. In addition, papers contains of several developed research questions that are tested by statistical methods. To sum up, article recommends marketing strategy for green product placement and type of credible and responsible communication policy.

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1. Introduction

Over the few last decades, the world has rapidly changed. Firstly, there is great social gap between people, the Earth's space is limited and population is constantly growing. Secondly, there is exponential number of campaigns promoted by groups, which focus on environmental issues because of the alarming state of the natural environment. This extraordinary time is defined by a lack of natural resources, imperfect economics, and climate change.

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Companies, organizations and institutions are facing the challenge to find the sustainable solutions and making up this situation.

Sustainability and sustainable development have become the often used terms. The emergence of sustainability in its contemporary form stems officially from the UN's creation in 1983 of the World Commission on Environment and Development (WCED), headed by Gro Harlem Brundland, former prime minister of Norway. The most remembered quote from the Brundland report (Edwards, 2005) defined sustainable development as "development that meets the need of the present without compromising the ability of future generations to meet their own needs." From that time, the theme is most widely discussed by governments, organizations and customers, and that such a discussion will have a major impact on the thinking and behaviour of individuals and society as a whole (Raposo, 2012).

People are part of the economic cycle as customers, but as well as employees. Our survey showed that 65% of respondents expect competent organs take social and ecological responsibility. The second question tried to find out who specifically is responsible and should solve this situation. Almost 68% of answers were addressed to companies. This means, companies, as the main core of economic cycle, have to set up strategy to decrease negative impacts on society and make up this situation, involve customers and educate them. Companies need to consider a holistic approach across whole chain and principles as sustainability, environmentally friendly, social responsible take into daily business practice. Then they will follow the basic of current mainstream – green marketing (Grimmer, 2013). Consequently, on the one hand green marketing allows the companies to access to new markets, to increase their profitability and to enjoy more advantages that are competitive. Moreover, it is assumed that "green market" will significantly grow even more in near future, because customers more and more seek for "green product" and products that are produced by responsible companies (Bachman, 2009). If company does not want to lose the position it needs to develop new strategy, which starts with segmentation.

2. Green marketing segmentation

Marketing process involves a variety of strategic and tactical activities. Green marketing, as well as conventional one, carries two major issues – marketing mix and marketing strategy. Marketing strategy is continuous cycle which involves sequence as measurement of demand, segmentation, targeting, positioning (STP process) that lead to formation of competitive advantage (Krizanova, 2010). Scientists and marketers have put a lot of effort into defining and understanding the relationship between the level of ecological awareness and customer buying behaviour. There are hundreds of surveys concerning the protection of the environment. However, one thing is to carry out surveys on environmental attitudes, but on the other hand, there is necessity to categorize them into major groups that describe and predict their buying behaviour (Kicova et. al, 2013). The next step then is to choose the group, develop product and appropriate strategy for its placement and promotion. It is clear, the customer who has ecological awareness and behaviour having greater propensity to buy organic products. Anyway, there can be barriers that limit such behaviour, such as lack of money, unwillingness to change lifestyle or sacrifice convenience, poor availability of organic products etc. For this purpose, companies use marketing segmentation.

Segmentation criteria

Marketing segmentation was proposed more than 40 years ago by sociologist Daniel Yankelovich, one of the first analysts of public opinion. In 1964, he presented the idea of classifying customers based on criteria as age, place of residence, income, education and other demographic factors that help businesses determine the what products to

develop and how they should be promoted. At that time, Yankelovich claimed that non-demographical factors such as values, lifestyle preferences influence the buying behaviour more than demographic factors. In 1978, group of Stanford Research Institute moved this knowledge to a higher level and presented “Values and Lifestyles - VALS”, marketing tool that classified individuals in the basis of nine psychological types as a way to predict their behaviour. Factors such as the history of previous purchase, loyalty to a product, a tendency to change brands informed what values and attitudes leading customers to see the individual offer differently. Several further proposals were set. Currently, Nielsen offers a complex system of customer segmentation (Nielsen, 2015). PRIZM® is customer segmentation based on the combination of demographic, psychological, customer behaviour and geographic factors. It divides customers and their households into 66 demographically and behaviorally different types of segments.



Fig. 1 Segmentation criteria (Source: Author)

Figure 1 shows the relations between individual factors and their power.

GfK Roper group performed the first marketing segmentation regarding to environmental sensitivity of the customer in US. Two thousands customers surveyed. The result has been varying the different degree and motivation to buy green products and willingness to pay higher price for these products. Customers were enrolled into five groups according to the responses: True-blue green, Greenback Greens, Sprouts, Grousters, Basic Browns. LOHAS (Lifestyles of Health and Sustainability) is considered as the most comprehensive marketing research. It is focused on offer of green products that are related to health lifestyle and environmental friendly, social responsibility and fairness, personal and sustainable development. The first group consists of LOHAS, followed by Naturalists, Drifters, Conventionals, Unconcerned. J. Ottman requisitioned this classification and added the extra four dee-green sub-segments that are mostly depend on customers activities and hobbies. Therefore is going bout Resource Conservators, Health Fanatics, Outdoor Enthusiastic, Animal lovers. (Ottman, 2011) J. Makower, 20 years experienced green marketer, presented very truthful following segmentation: Committed, Conflicted, Concerned, Confused, Cynica (Makower, 2011). All segmentation introduce to companies the opportunity to get to know their customers better, to know his attitudes, to engage him, educate and inspire to better and especially ecological friendly decisions. Customers need more than inspiration, they need to see the context between their decision and benefits they gain and that are profitable for whole society. It is essential to realize that there is no one universal strategy of green marketing, therefore there is no universal segmentation.

Hofstede’s cultural dimensions

Gerard Hofstede is a Dutch social psychologist, well known for cross-cultural research and development of cultural dimensions that are very often used in international marketing as segmentation criteria. The key term of Hofstede’s research is national culture that is defined as “*collective programming of the mind distinguishing the members of one group or category of people from others*”. He created four cultural dimensions and quantified values

for them. Cultural dimensions are Power Distance, Individualism, Uncertainty Avoidance, Masculinity, Long Term orientation Indulgence, and Pragmatism (Hofstede, 2015).

Power distance expresses the degree to which the less powerful members of a society accept and expect that power is distributed unequally. The fundamental issue here is how a society handles inequalities among people. In societies with low power distance, people strive to equalise the distribution of power and demand justification for inequalities of power.

Individualism (vs. Collectivism) describes the degree of interdependence a society maintains among its members. In Individualist societies people are supposed to look after themselves, individuals are expected to take care of only themselves and their immediate families. Its opposite, collectivistic nations, individuals can expect their relatives or members of a particular in-group to look after them in exchange for unquestioning loyalty.

Masculinity (vs. Femininity) represents a preference in society for achievement, heroism, assertiveness and material rewards for success. Success being defined by the winner, best in field – a value system that starts in school and continues throughout organisational behaviour Its opposite, femininity, stands for a preference for cooperation, modesty, caring for the weak and quality of life. *The fundamental issue here is what motivates people, wanting to be the best (masculine) or liking what you do (feminine).*

Uncertainty Avoidance expresses the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity. Countries exhibiting strong UAI maintain rigid codes of belief and behaviour and are intolerant of unorthodox behaviour and ideas. Weak UAI societies maintain a more relaxed attitude in which practice counts more than principles.

Long term orientation (vs. short term normative orientation) Societies who score low on this dimension prefer to maintain time-honoured traditions and norms while viewing societal change with suspicion. Those with a culture, which scores high, on the other hand, take a more pragmatic approach: they encourage thrift and efforts in modern education as a way to prepare for the future.

Indulgence (vs. resistant) is based on the way they were raised. Relatively weak control is called *indulgence*” and relatively strong control is called *“restraint”*. Indulgence stands for a society that allows relatively free gratification of basic and natural human drives related to enjoying life and having fun. Restraint stands for a society that suppresses gratification of needs and regulates it by means of strict social norms.

Pragmatism (vs. Normativism); describes *how every society has to maintain some links with its own past while dealing with the challenges of the present and future*, and societies prioritise these two existential goals differently. Normative societies who score low on this dimension, for example, prefer to maintain time-honoured traditions and norms while viewing societal change with suspicion. Pragmatic approach is described by encourage

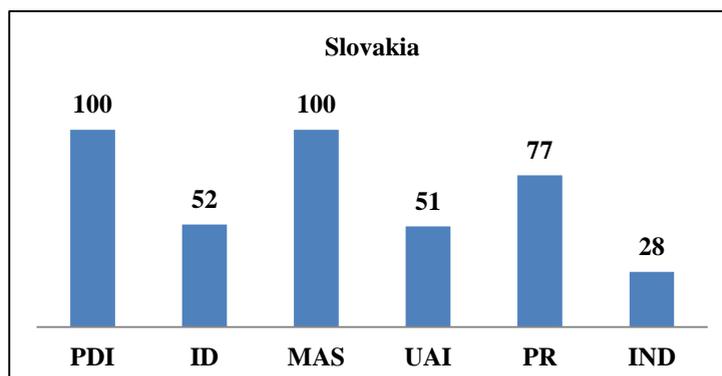


Fig. 2 Hofstede's dimensions values for Slovakia (Source: Authors, based on <http://geert-hofstede.com/>)

thrift and effort in modern education as a way to prepare for the future.

Slovakia can be described as high power distance and strongly masculine society. In dimension of individualism, Slovakia, is right in the middle of this dimension, thus it points to no clear preference. With an intermediate score 51 of uncertainty avoidance, Slovakia shows no clear preference as well. Slovakia has mostly pragmatic culture. A low score of 28 on indulgence dimension means that Slovakia has a culture of restraint. Societies with a low score in this dimension have a tendency to cynicism and pessimism. In addition, in contrast to indulgent societies, restrained societies do not put much emphasis on leisure time and control the gratification of their desires.

3. Methodology of survey and research questions

This paper applied the questionnaire survey to verify the research questions. The object of this survey was green customer segmentation based on the customer behaviour, segmentation criteria and Hofstede's cultural dimensions. The questionnaire was randomly mailed to Slovak inhabitants over 18 years, because we assumed they provide their purchasing independently. For the calculation of relevant sample we have used formula:

$$n = \frac{z_{t-a/2}^2 * S^2}{H^2}$$

Therefore, sample size was 384 and we satisfied this number. The research used statistical method chi-square test to test research questions.

For calculation correlation, we used chi-square formula:

$$\chi^2 = \sum \sum \frac{(O - E)^2}{E}$$

Where:

χ^2 – Chi Square obtained;

\sum - the sum of;

O – observed score;

E – expected score

Since none of surveys or researches were provided in Slovakia, we decided to develop new one. Our survey is based on typical signs of Slovak culture where we used Hofstede's dimensions in comparison to demographic, psychographic, socio/cultural, user behaviour criteria. Based on literature overview we assumed and developed research questions:

1. If the score of Hofstede's cultural dimensions of uncertainty avoidance, collectivism, long-term orientation, feminine, pragmatism, resistance is higher, society will behave more environmental friendly.
2. There is a positive correlation between gender and willingness to buy more eco-friendly products.
3. There is a positive correlation between gender and internal need to care about environment.
4. There is a positive correlation between the purchasing of green products and customer's highest level of education.
5. There is a positive correlation between purchasing of green products and customer's net monthly income.

At the beginning of the survey we asked about demographical data: age, gender, income, education, region. Next questions were related to their intentions to buy green products, save energy and sources, lifestyle, mode of transport used, whether they recycle, the main motivation to buy product. Specifically, how often they consume imported foods, locally grown foods, chicken, beef, fish and seafood, fruits and vegetables, food grow their self, bottled water. How often do they drive alone in a car or truck, use public transportation (buses, subways, streetcars, trams), take air transport. Surveyed should stated id they use energy-saving electrical equipment, especially fuel-efficient vehicles, such as hybrid engine or alternative fuel engine. How often they walk or ride bike to their destination if the distance allows it, avoid products packaged in excessive packaging, jeep the heating or cooling in their home or workplace at low settings to save energy, buy certain products specifically because they are better for environment than other

products. Then they had to indicate if they agree or disagree with statements as: The extra cost of environmentally friendly products is not worth it to me. I choose to live close to the places I need to travel to on most days specifically to minimize the impact on the environment caused by transportation. I prefer to repair, recycle, recover, reuse something rather than replace it.

4. Results of survey

We used literature overview and study national culture observation for the first research question.

Table 1. Slovak society performance vs. Hofstede's cultural dimensions values

Hofstede's culture dimension score – Slovakia	Environmental friendly society value	Slovak society results
Individualism 52	↓	□
Masculinity 100	↓	✘
Uncertainty Avoidance 51	↑	□
Long term orientated	↑	✓
Indulgence 28	↑	✓
Pragmatism 77	↓	✘
Power distance 100	↑	✓

Generally, we can assume several points that should be done by deep research. If the society has a high score of PDI, that means many law regulations, norms, etc. Anyway, it is not clear if these regulations are related to environmental friendly behaviour, but assumption is if the score is higher, care about environment is higher. Then, it is expected if the society is more collectivistic, people will care about nature and environment more, because they think as “we” and think about future, and future generations. It is linked to feminine society. If the score of masculine is higher, it is assumed that society care about other values that could be reached immediately, not about future generation and sustainability. This is connected with another dimension, uncertainty avoidance. High score means preparation or avoiding for uncertain situation, i.e. depleting natural resources, climate change. Last dimension, pragmatism, could characterise people that live their lives guided by virtues and practical good examples. It could be seen long term orientation in the constantly high rate of investment in R&D even in economically difficult times, higher own capital rate, priority to steady growth of market share rather than to a quarterly profit, and so on. The idea behind it is that the companies are not here to make money every quarter for the shareholders, but to serve the stakeholders and society for many generations to come. Otherwise, this absolutely opposes the last dimension, indulgence. If the society is more resistant than indulgent, it could be assumed that people think more about global problems and their purchasing behaviour is based on environmental facts. They prefer green products and social responsible companies. Therefore, according to official Hofstede's dimensions values for Slovakia, we can sum up, there is no clear preference about environmental behaviour.

As was mentioned, some of the research questions were tested by chi-square test. Here are results:

The second research question: “There is a positive correlation between gender and willingness to buy more eco-friendly products” was supported. $\chi^2(30.644) > \chi^2_{tab}(17.815)$, what means higher willingness to buy eco friendly product by women.

The third research question: “There is a positive correlation between gender and internal need to care about environment.” was not supported, $\chi^2(14.219) < \chi^2_{tab}(15.991)$, what means that carrying about state of environment is not depend on gender.

The fourth research question, there is a positive correlation between the purchasing of green products and customer's highest level of education was supported, $\chi^2(46.905) > \chi^2_{tab}(21.026)$, what means the higher educated people care more about the environment and consequences of their behaviour, therefore they buy

green products more. Slovakia belongs to European countries that have the highest rate of high-educated inhabitants, what is very positive.

The fifth research question “There is a positive correlation between purchasing of green products and customer's net monthly income” was not supported, $\chi^2(16.919) > \chi^2_{tab}(24.609)$. This means, it does not matter how much people earn. There is no correlation between green intentions and behaviour and monthly income to household. Maybe the reason is that people just realized that by purchasing energy saving equipment or organic food they can save their money in long-term period.

The survey showed the other important facts:

- 62% make their purchasing decision based on value on money principle;
- just 25% avoid excessive packaging of products
- 40% prefer fruit and vegetable grown locally even it is more expensive
- 52% keeping loyalty to certain brand, because they think the company is socially responsible and provide just high quality products;
- up-to 48% drink bottled water;
- 67% use energy-saving equipment (50% stated they use it because of money saving);
- up-to 80% of those people owning car prefer to drive car rather than use public transport;
- just 13% of those people who owning car use the especially fuel-efficient vehicle;
- 72% prefer to buy new product rather than reuse, recycle or recover it;
- 53% are not willingness to pay more for environmental friendly products;

5. Conclusion

Slovakia can be considered as a still developing country from some point of view. On the one hand, the rate of high-educated people is pretty high, economic situation is stable, on the other hand, people are not so much aware about consequences of their behaviour, what could be remnant from previous political regime and desire to enjoy finally what they could not before. Namely, we can assume it in case of transportation (prefer to use car than) or buying and drinking bottled water, kind of exotic products that could not be bought before. The survey showed, that many people behave environmentally responsible, because it is worth in case of money saving. Our suggestion for companies is to keep going in educating customers, engaging them to the development of products while meeting their needs. According to survey results, we can sum up that customers become more socially responsible to the environment, which leads to socially responsible consumption, such as saving energy, buying eco-labelled products, sorting waste or recycling.

However, in Slovakia, it is really hard to suggest clear segmentation criteria. It is possible to said that Slovak society is divided in two half as well as Hofstede's cultural dimensions values do not percept the clear preference. Anyway, we can develop three main groups that had the main common signs. Firstly we can use demographical criteria, age. There are two extreme parts, young people between 18-25 years, who are extremely involved in saving environment and youth that are totally do not care. The second group contains of economic the most active people between 26-55 years, who are quite stable. They think about their purchasing in long term period, try to live healthy and avoid negative impact on the environment, but do not want to give up to drive cars. Little differences can be seen between employees who for international companies or just Slovak founded companies. International one make their employees be more active and responsible in case of recycling for instance.

Third group contains of people over 55. It is possible to see differences between them in manner of behaviour. Their purchasing behaviour is mostly depended on the price. Therefore is an important factor, the amount of pension and also the position they worked during life.

Therefore it depends on company which segment will chose, the one that is need to be educated more or it will work with already green customers who are doing their best to save the company and decrease every single possible negative impact on the environment.

Anyway, green market is growing very fast and every single company should accommodate its business process to not lose market position or competitive advantage in currently hypercompetitive period.

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