Segmentation process in determining Slovak consumers’ attitudes toward brands

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Abstract: - Segmentation is one of the core concepts of marketing since consumers behave differently, have various preferences and attitudes. In order to be able to target the marketing activities more effectively, it is needed to create customer segments. The aim of this paper is to describe the process of segmentation in order to get main consumer profiles according to their brand preferences in terms of foreign vs. domestic brands. The results will be presented based on research conducted in Slovak consumers in year 2013 covering various areas of consumer brand behavior.

Key-Words: - segmentation, factor analysis, cluster analysis, brand buying behavior, attitudes toward brands, domestic vs. foreign brands

1 Introduction

After the fall of communism in former Czechoslovakia, the markets opened for foreign products and the demand for domestic production has fallen dramatically. Now, after more than 20 years, consumers understand the advantages and disadvantages of open economy. Their buying behavior has undergone many changes – from buying just available goods, mostly domestic production, often very similar in design, performance or price – through buying foreign products excessively as a sign of change and freedom of choice and maybe a rebellion – to understanding the domestic production and its benefits as well as the possibility of buying foreign products either in Slovakia or anywhere in the world thanks to the internet. There is a need to examine brand buying behavior of Slovak consumers and to identify their attitudes toward domestic and foreign brands. Therefore we decided to conduct such research and to explain the segmentation process in determining Slovak consumers’ attitudes toward brands and provide the segmentation results in order to get better insight into brand buying behavior of Slovaks. The research is a part of the scientific project VEGA 1/1051/11 The Analysis of Strategic Processes of Brand Building and Brand Management in the Context of Homogenization and Individualization of Consumer Needs approved by VEGA – scientific grant agency of the Ministry of
2 Problem Formulation

Customer segmentation is one of the pillars of marketing. Because the primary concept of marketing is to detect customer needs and, subsequently, satisfy these needs. The problem is that customers vary and heterogeneity is an integral part of marketing practice. Marketers must identify common needs within similar groups of customers and recognize distinctive needs between different groups of customers [1]. This is the core idea of the concept of market segmentation introduced in 1956 by Wendell Smith. He recognized there is significant diversity or heterogeneity in consumer demand and he stated: “Market segmentation consists of viewing a heterogeneous market as a number of smaller homogeneous markets, in response to differing preferences, attributable to the desires of consumers for more precise satisfaction of the varying wants” [2].

Marketers have recognized the importance of differences among consumers and developed models and techniques to detect these differences, because marketing decisions depend on correct understanding of heterogeneity [3]. The key information is that there is not such a thing as average customer. They are different people with different needs, preferences and attitudes. Thus there are some similarities in their behavior and with help of statistical and mathematical models these similarities can be discovered. There are four basic steps that apply to traditional segmentation methods:

1. Reducing data with factor analysis - Factor analysis is a data reduction tool, because data from marketing research often contains similar or interrelated information. Factors are formed so that they are relatively independent of one another and large data set of segmentation variables are reduced into smaller set of “derived” variables [4].

2. Identifying and removing outliers - In most research data, answers that notably differ from all other can be found. They are so called outliers and occur for different reason. It is the best to search for them and remove them form research, because they can lead to unstable and unreliable segmentation results [5].

3. Determining number of clusters - A fundamental problem in segmentation is to determine the number of clusters. There are various methods for estimating the optional number of clusters and they are usually run simultaneously. Nevertheless, the usefulness of a cluster analysis depends on the final interpretation and cluster formation [6].

4. Performing cluster analysis - Cluster analysis involves various techniques to classify objects into homogeneous groups where objects in each cluster are similar to each other and dissimilar to objects in another cluster. By choosing a specific clustering technique, we determine how clusters are formed and how to determine the (dis)similarity between objects in each cluster [7]. Once clusters are identified, the description of the clusters in terms of the variables used for clustering, or using additional data such as demographics, helps in customizing marketing strategy for each segment. This process of describing the clusters is termed “profiling” [8].

3 Problem Solution

In order to get accurate results in segmentation of Slovak consumers, a representative research was performed and four basic steps, as stated in section above, were applied to obtained data.

3.1 Research description

The population for the research were Slovak consumers 16 years of age and older. In total numbers it is more than 4.5 million consumers. If the population was homogenic and the nature of the research would be exploratory, smaller sample size would have been sufficient. But according to the nature of the study and the goal to generalize the results for the whole population, following formula for indefinite populations was used to determine the sample size [9]:

\[ N = \frac{z^2 \times p(1-p)}{H^2} \]

Where N is the sample size, Z is the value of test statistics corresponding to a confidence level, p is the sample proportion and H is the permissible error.

In our research we calculated with the confidence level of 95 percent (test statistics to this value is 1.96), sample proportion was 0.5 since we wanted the most conservative sample size and the permissible error was set to 3 percent, giving us the sample size of 1067.

\[ N = \frac{1.96^2 \times 0.5(1-0.5)}{0.03^2} = 1067 \]

To be able to draw conclusions form the research and to get accurate results, quota sampling was used. It ensures that chosen subgroups are represented in the sample to the exact extent as they
are in the population. It is a form of proportionate stratified sampling in which a predetermined proportion of elements are sampled from different groups in the population [10]. The quotas of this research were gender, age, education, and income. Data was collected from January to April 2013 in Slovakia and the instrument for data collection was a questionnaire. Respondents were presented with a list of statements concerning their attitudes towards domestic and foreign brands and their brand buying behavior. Likert scales, as a very common and easy tool for measuring attitudes, were used in the questionnaire. The data were evaluated in R, software for statistical computing and graphics. The techniques used in R were factor analysis followed by cluster analysis in order to obtain consumer segmentation based on their brand buying behavior.

3.2 Factor analysis

The initial number of statements in the questionnaire was 24. The number of factors was determined by parallel analysis and Kaiser criterion. According to both techniques, the optimal number of factors was six. The results can be seen below.

**Factor 1 – Preferring Slovak brands**
Statements in Factor one favor Slovak brands. It is important for people to buy Slovak products, they usually prefer Slovak brands, and they trust Slovak brands and think these brands have better quality than foreign. They are also willing to pay more for Slovak products and they buy Slovak brands because they like Slovakia.

**Factor 2 – Foreign brands are better**
Typical for this factor are positive feelings towards foreign brands. Foreign brands are seen to have better quality, are more trustworthy, people have better experience with them and they usually go to shops with foreign brands.

**Factor 3 – Do not care about brands**
This factor represents no preference in brands. Brands are not important in buying decision process; people usually prefer cheap products and do not care about the brand.

**Factor 4 – Carrying about country of origin**
Statements in Factor four are related to products’ country of origin. It is important where products are made, people take time to find out some information about country of origin and they mostly prefer Slovak products, but also buy brands based on their previous experience.

**Factor 5 – Foreign brand are more available**
There are four main statements in Factor five showing us that foreign brands are perceived to be more available and cheaper than Slovak brands, people usually go to shops with foreign brands and they feel confused with great variety of brands, sometimes.

**Factor 6 – I love Slovakia**
The most significant features for this factor are buying Slovak brands to support the economy and buying Slovak brands because of positive feelings for Slovakia.

3.3 Removing outliers and determining number of clusters

From the sample size of 1056 we filtered away more than 100 respondents in order to get reliable segmentation results. To determine the optimal number of clusters, 26 various methods were used and based on the results, we chose to create 6 clusters. This decision was made on previous segmentation experience and supported by given analysis.

3.4 Cluster analysis results

The main goal of our research was to create segments in Slovak consumers concerning their attitudes towards brands. Based on previous stages of the segmentation process, 6 segments were created. The basic scale measuring the attitudes ranged from -2 (strongly disagree) to +2 (strongly agree). Results from the cluster analysis are as follows.

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**Factor 6 – I love Slovakia**

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Consumers preferring Slovak brands and having positive attitudes towards Slovak products are in cluster one. These consumers are very aware of where the products they purchase were made and they think Slovak products have better quality, thus they agree foreign brands are more available. The main reason for purchasing Slovak products is supporting Slovak economy.

Consumers in segment two do not care about brands. Typical signs for their brand buying behavior are having no preferences; no feeling toward domestic or foreign brands and the main reason for choosing their brands is price. They prefer cheap products.

This cluster is typical for positive statements toward foreign brands. People usually do not buy Slovak brands and if they do, it is because they want to support Slovak economy. But in general, they prefer foreign brands because they are more available and have better quality than domestic brands. These consumers are very aware of what they are buying and take their time to find out where their products were made.
Consumers in this cluster do not have uniformed behavior and they differ in their attitudes. Most of them do not care about brands and price is the main trigger for their decisions. If they decide upon brands, than they prefer Slovak products. They do not agree foreign brands are more available than domestic.

Neutral feelings toward bands are typical for consumers in cluster five. They do not care about the country of origin but they agree foreign brands are more available. They do not have any special preferences of requirements concerning brands. These consumers can be seen as neutral in heir buying behavior and brand preferences.

The most typical feature for consumers in this cluster is their positive feeling for Slovakia and Slovak products. They buy these products because they want to support the economy, because they like Slovakia and they pay special attention to purchasing Slovak brands. They care where the products of their choice were made and they tend to prefer domestic brands over foreign.

4 Conclusion
Perception of brand and countries is dependent on consumers’ position in relation with countries as such, customer segments can be defined according to their attitudes toward domestic goods or goods imported to their home market [11]. Segmentation is a basic concept of marketing and it helps marketers to satisfy the needs and wants of target markets more effectively. To simplify the whole process and to avoid using overlapping data it is advised to reduce the initial data with factor analysis. After removing outliers and determining the number of clusters, based both on statistical methods and expert knowledge in the concrete research field, the cluster analysis can be preformed. In our research of consumer brand behavior we were able to define 6 segments. The biggest segment is a cluster of consumers who prefer Slovak products followed by cluster of those who do not care about brands and make their purchase decision based on price levels. Segment three is typical for consumers who prefer foreign brands. Then there is a cluster with consumers who have neutral feelings toward brands and a cluster of consumers without uniformed behavior. The last segment is a segment of consumers who like Slovakia and buy domestic products to support Slovak economy.

References:


