The Impact of Flat and Mineral Water Consumption on the Quality of Life in Romania

Steluta Radu  
*University of Agriculture Sciences and Veterinary Medicine of Iasi, Romania*  
stelaradu2010@yahoo.com  
Mihaela Constandache  
„Carol I” Commercial College of Constanța, Romania  
mihae CONSTandache@yahoo.com  
Liliana Nicodim  
„Ovidius” University of Constanța  
nicodimlili@yahoo.com

Abstract

The consumption of flat and mineral water has increased significantly on the Romanian market. However, consumer preferences are extremely varied, which means that they do not fully know the benefits of using water as a basic element in our daily diet. The design of this survey outlined the principles that guide consumers when purchasing bottled water, as well as their preferences. We used a sample of respondents, selected by gender, age, residence, level of education, occupation, purchasing power. The study highlighted the types and behavior of consumers when purchasing natural mineral water, as well as consumption preferences and their opinion on the quality and benefits water on the Romanian market. Segmenting the sample of consumers according to the criteria enumerated above brings us information that the behavior of the Romanian consumer is more related to subjective criteria price, purchasing power on detrimental to the quality of the water.

Key words: modern marketing of water consumption  
J.E.L. classification: M31

1. Introduction

Following the consumer's behavior in terms of water quality and benefits, people's consumption preferences and appreciations about natural mineral waters were highlighted, as well as their expectations when purchasing bottled water.

Therefore, this paper outlines the information of the consumer sample about the quality of natural and acidified mineral waters by impregnation with carbonic acid.

Buyers' behavior and expectations change over time. The rapid pace of technology development has an important impact on the life of products, globalization and mobility of people and companies, all of which contribute decisively to these changes. Thus, segmentation must be periodically reviewed and adapted to changes in the market and new consumer expectations. A 2003 survey conducted by the IBM Institute for Business Value on 120 respondents, companies with revenues of over $100 million, shows the importance of segmentation in the success of various marketing activities (Philip Kotler, 2003).

2. Theoretical background

According to the same survey, customer segmentation is used by other functions of successful organizations such as: developing the company's strategy, contributing to increasing the certainty that its activity is carried out in the same direction as customer expectations. influences decisions...
on establishing current and future markets, contributes to improving financial planning according to customer behavior forecasts, influences decisions on developing new products, optimizing the organizational structure to better meet the needs of various customer segments. Thus we can conclude that "Today, segmentation is no longer just a simple or static marketing technique but the central element of how successful businesses conduct their business." (Mekouar, 2016) - including a theoretical presentation of the concepts used in the paper or an overview of the scientific literature in the field of the topic, presenting in a synthesized manner the most important references to the topic.

3. Research methodology

Consumer segmentation is a process of analyzing consumers, with the aim of establishing marketing actions, which will increase their profitability. This method has been used for many years by medium and large organizations and very little by small ones, especially due to the cost and expertise needed to achieve it.

Given the current technological development, which allows faster and cheaper access to new resources and methods of analyzing consumer behavior, customer segmentation is becoming more accessible. At the same time, due to the increase of buyers' expectations and desires, of the increase of the competition on various markets, the segmentation of the consumers becomes more and more necessary for the increase of the profitability of the organizations. Consumer segmentation is the process by which customers are divided into homogeneous groups according to their needs and expectations. (Philip Kotler, 2003).

Market segmentation is the first pillar of the marketing strategy called "target marketing". The second pillar is "target market choice" and the third "market positioning".

One of the purposes of segmentation is to focus marketing activities on the segments on which it is estimated that the most efficient and effective results will be obtained.

The segmentation criteria can be divided into the following groups (Philip Kotler, 2003):

- Geographical - depending on the geographical regions on which the organization operates, population density, climate;
- Demographics - age (18–25, 26-30, 31–40, 41-50, 51–65,65 +), sex (F, M), religion, number of family members (1 - 2, 3 - 4, 5+), family situation: (single, married, with children, married without children), studies (8 classes, high school, university, postgraduate), profession, income;
- Psychographic: lifestyle, personality; behavioral, usage/purchase rate (non-users, former users, potential users, first time users, regular users), purchase opportunities, frequency of purchase (occasional, medium, frequent), product loyalty (enthusiasts, people loyal to a small number of brands, people who change brands, infidels or people who change brands constantly), attitude towards the product (enthusiastic, positive, indifferent, negative, hostile), consumer position along the way until purchase (does not know about the product, knows the product, is interested in the product, wants to buy the product).

Segmentation by geographical and demographic criteria can also contribute to the identification of regions in which a company (generally a retailer or business that has opened store chains will open new stores).

Psychographic segmentation involves dividing consumers into groups according to their attitude and tastes using psychology and demography, in order to better identify the profile of that segment and to define targeting and positioning actions as efficient as possible.

The segmentation steps were performed according to the Prizm system developed by Claritas-Nielsen: Establishing the market on which the segmentation is done, gathering information about customers, defining the segmentation criteria, defining the profile corresponding to each segment (description of the respective segments), validation of the segmentation.

The chosen segmentation criteria must ensure that: the groups do not intersect, are large enough to be important in terms of the profitability of the defined marketing action, the segments must be identifiable and measurable, the segments are accessible and allow their targeting.

Some criteria from the RFM method (Recency, Frequency, Monetary) were also used to segment customers and define marketing actions focused on each segment to increase the profitability of existing customers. when determining the clients that can be lost. when determining
the life value of the clients, when making offers adapted to each segment. This method classifies customers according to the three criteria: the time elapsed since the last purchase (Recency), the frequency of purchase (Frequency) - the number of purchases made by the customer in a given period of time (example: number of purchases per year, value (Monetary) - the amount spent by the customer in a certain period of time. The method is based on the assumption that, the more a customer has bought more recently, the more he buys in a period of time and the volume of purchases is bigger, it is more profitable. ([https://clevertap.com/blog/rfm-analysis/](https://clevertap.com/blog/rfm-analysis/)).

4. Findings

By designing a sociological survey, the principles that guide consumers in their consumption choices for flat or mineral water have been outlined. Regarding the share of the consumer sample was grouped by 6 age groups, we found that: 64% are aged between 18-25 years, 20% are aged between 26-30 years, 12% aged 31-40 years, 4% between 41-50 years (figure no.2). We had no respondents older than 50 years.

![Figure no. 1 Dynamics of the sample of respondents by gender (female/male)](image)

![Figure no. 2 Share of consumer sample by age](image)

Source: (**results obtained from data processing**)

After residence, 56% are from the urban area, 4% from the peri-urban area (suburban), and 40% from the rural area (figure no.3). Regarding the level of education, we observe that 53% have reached the level of deepening higher education (dissertation), 36% have studied at college and only 15% have high school education. So, the interviewed sample has an above average level of education (figure no.4).

![Figure no. 3 Dynamics of the sample of respondents by residence](image)

![Figure no. 4 Dynamics of the sample studied by level of education](image)

Source: (**results obtained from data processing**)
In terms of employment, a segment of buyers of 72% told us that they are employed, 12% are students, 5% are entrepreneurs and again 5% are unemployed. It is found that most buyers are employees, followed by the student segment. (figure no.5). According to purchasing power, income per month earned 25% of respondents earn between 500-700 euros, 12% earn between 700-1100 euros, 9% with 1100-2000 euros, and only 6% earn between 2000-2500 euros. It is observed that the purchasing power is not spectacular, but soon most buyers are those with average incomes and slightly above average from the 6 groups sampled (figure no. 6).

Source: (*** results obtained from data processing)

The dynamics of the respondents who prefer flat water is very high of 68%, and those who consume mineral water is only 28%. (figure no. 7). Among the criteria that have a major importance when choosing bottled water, the price with a weight of 60% is highlighted and only 32% aim to be a good quality water (figure no. 8).

Source: (*** results obtained from data processing)

By testing consumers in terms of water consumption, they prefer flat water in a share of 68%, and those who consume mineral water have a share of 28%. (figure no. 7). As a result of this fact we sampled the segment of consumers who consume plain water and we obtained the following results:
Regarding the share of flat water consumers, 94% say that water is good for health and only 6% have the opposite opinion (figure 11). Then, 48% of the interviewed consumers consume at least 2 l of water daily. 52% do not consume 2 l, but less. The percentages show us why the state of health of the population in Romania is experiencing a decreasing trend today (figure no. 12);

Regarding the flat water assortments preferred by the interviewed consumers, it is observed that Borsec is on the first place, Aqua Carpatica on the second place, Dorna on the third place, and Bucovina, The spring of wonders have only 4-6% (figure no 13).

At the question "Do you usually choose the known water assortment or do you experiment with another one?" the sample of respondents indicates that he is a loyal customer and buys the water assortment known in proportion of 70% and only a segment of 30% of respondents wants to test another assortment (figure no. 14).

How often do you buy water?

Source: (** results obtained from data processing)

Regarding the percentage of consumers who remain loyal to the assortment of water often consumed, we notice that it is significant. That is why the market share registered by these producers is in economic-financial advantage. At the same time, the share of 30% of consumers who can change the assortment shows us that the innovation of new products or the entry on the market, the increase of market shares of some small or medium producers is very difficult.
Marketing costs for replacing traditional products are not justified due to those presented above.

**Figure no. 13** Percentage of consumers by the most consumed water assortments

**Figure no. 14** Percentage of consumers consuming the same assortment versus percentage of

Source: (** results obtained from data processing)

**Figure no.15. Interpretation of the performance of the results obtained in sociological research**

Source: (** results obtained from data processing)

The statistical interpretation was performed by comparing the data strings of the characteristic-degree of satisfaction type. Thus, from the statistical correlation established the trends by categories of expectations were established, as follows: at the satisfactory level a superior performance was obtained for all criteria-design, price, quality and brand, at the unsatisfactory level a lower quality performance was obtained and design, and at an excellent level a superior performance in design and quality was obtained (figure no.15). We say that we obtained a superior positive correlation because the points, although not aligned perfectly, but are grouped around a straight line.

5. Conclusions

The RFM (Recency, Frequency, Monetary) method must be used with care because: the classification made presents a situation of the clients at a given moment. Over time, this can change, it can lead to overburdening very profitable customers, it can lead to giving up certain customers who over time can turn into potential customers. Regardless of the segmentation criteria and the methods used for it to be effective, the aspects related to time and profitability must be taken into account.
The study highlighted the types and behaviour of consumers when purchasing natural mineral water, payment, as well as consumption preferences and their opinion on the quality and benefits for the body of bottled water on the Romanian market.

Segmenting the sample of consumers according to the criteria of age, occupation, purchasing power, quality, price, design, brand brings us valuable information that the behaviour of the Romanian consumer is more related to subjective criteria - price, purchasing power, on detrimental to the objective criterion - the quality of the water we have to consume.

Water influences the health of the population directly (through its biological, chemical and physical qualities - the content of trace elements Na, Ca, Mg, F, etc.) or indirectly.

Chemical elements such as nitrates in water, once ingested, turn into nitrites - substances much more toxic than nitrates, following contact with bacterial microflora of the stomach. The effects of ingesting an amount of nitrates above the allowable limit can be: hypertension, system dysfunction circulatory and thyroid glands, headaches, hives, intoxication, severe cyanosis, even cancer. The most vulnerable to nitrates are infants. The most dangerous effect of nitrate contamination in babies is a condition called methemoglobinemia, also known as "blue baby syndrome" (http://blog.aquacarpatica.com/).

6. References