# CONSUMER-SIDE DECISION FACTORS ON THEIR SELECTION OF BOTTLED WATER BRANDS: STATISTICAL METHOD STUDY IN A KOSOVO SAMPLE

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**Abstract:** Nowadays, to meet people's needs in daily life for drinking water, many companies provide bottled drinking water. As this industry grows and more competition occurs, the companies should know the aspects that influence people to buy the products that are bottled drinking water. Although this increase in several bottled water producers can be attributed to market demand and technology modernization, the fact that consumers migrate from one brand to another is significant and indicates that there are factors that affect the consumer's decision when choosing the bottled water brand. The aim of this paper is to identify and analyze the factors that influence consumers the most when choosing a bottled water brand in the market, using Kosovo as a case study. To define factors based on the consumer's preferences and valuations of the importance, the principal component analysis was applied based on a correlation matrix, using a component extraction method with a varimax rotation and a Kaiser-Meyer-Olkin adequacy test.

The findings show that the consumer's decision is influenced mostly by six key factors, namely quality, marketing, consumer perception, price, preference and practicality. The research provides new insights into the bottled water manufacturing industry and marketers in positioning themselves in a competitive environment.

Keywords: consumer decision making, bottled water, factors, quality, packaging.

## 1. Introduction

The scarce availability of drinking water is becoming more of a worldwide issue every day. Industrialization and the development of transport infrastructure are to be considered as some of the main water polluters, which is a serious threat to our modern society. Therefore, people today have started to adopt different strategies for fulfilling their drinking water needs with specific attention to their health. The Kosovo Agency of Statistics (ASK 2018) has published Water Statistics in Kosovo for 2016–2017. In 2016, about 89.59% of Kosovo's population was supplied with potable water through public systems managed by the regional water companies, while about 10.41% of the population did not have access to water supply services. Although a large part of the country is supplied with potable water from local public companies, there is an ongoing increase in

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the number of businesses that process bottled water. This is also due to the fact that the demand for bottled water is also increasing. According to data obtained by the Ministry of Trade and Industry, the Kosovo Business Registration Agency shows that since 2012, there has been an increase of 36% in the number of registered businesses for the production of bottled water, mineral water and refreshing drinks. According to Ferrier (Ferrier 2001), the increased trend of bottled water consumption reflects our modern way of life. The same study argues that the development of urbanization deteriorates the quality of tap water and, on the other hand, the growing standard of life enables people to bring home more heavy and expensive bottled water. Furthermore, de França (Doria 2010) argues that bottled water consumption is related to demographic factors such as race, income and gender - unlike education and income, which were found to be associated with the perception of risk when drinking tap water. This made the water processing companies to realize the need for bottled drinking water and the power of profit generation from the market. As argued by (Nikitaeva 2012), in today's highly competitive business environment, an attractive, valuable package may be the last chance for the seller to influence the buyers' purchasing decisions. Therefore, advertisers spend millions each year to familiarize the consumers with their product attributes and brand image. This growth can be greatly devoted to perceptions created by bottling companies through their advertisement and promotion of their water as "pristine" and with "healing" attributes.

The research purpose of this paper is to identify and gain a better understanding of factors that influence consumers the most when selecting a brand of bottle packed water. The research objective is to analyze the main factors based on the consumer's preference and valuation. The findings will contribute to the bottling water industry, particularly in understanding the factors that customers consider when choosing their water brand. This study will contribute to the water processing and packaging manufacturers by showing them how to efficiently utilize the use of their resources in meeting the needs of their consumers.

# 2. Literature Review

Bottled water consumption has been an increasing global trend during the last decade. Development activities and improved living standards play an important role in increasing the trend of bottled water sales and consumption, which is why there is an increased number of bottled water distributors and sales points. Although this increase in many bottled water producers can be attributed to the market demand and technological modernization, and the fact that consumers migrate from one brand to another is significant, it indicates that there are factors that affect the consumer's decision when choosing one particular brand of bottled water. The brand name of the water company is a fundamental indicator of the success of the water processing companies. According to Keller (Keller 1993), the brand name is a very significant choice, because it sometimes captures the central theme or key association of a product in a very condensed and reasonable fashion. Some authors (Aker 1991; Keller 1993) argue that the set of associations that consumers have for a brand is an important component of brand equity. Such brand associations include both user imagery and psychological benefits. Many consumer researchers (Escalas & Bettman 2003; Setterlund & M.Niedenthal 1993) have found that people choose situations including products and brands by imagining the prototypical users for each item in the choice set and choosing the item that maximizes their similarity to a desired prototypical user. In addition to the brand name, another important factor for bottled water is the taste and odor. The importance of the latter is recognized for drinking water; therefore, many people prefer bottled water simply because of its taste and odor (Foote 2011). Bottled water, packed in a dedicated source or plant, may have a more consistent taste than tap water, which comes from surface sources and must travel through pipes to reach homes (EPA 2005). Therefore, the perception of water quality is an important factor when choosing the bottled water to drink. On the other hand, the influence of the price factor on the customer's choice of bottled water brand is the key rational factor influencing the brand choice. In fact, for some customers, the price is the main factor when choosing the bottled water brand. For most, however, there is a direct trade-off between price and quality and, according to Mullarkey (2001), customers will pay a higher price if the brand is of sufficient quality. Some customers sense value if the price is low, whereas others perceive value if a balance exists between quality and price. In other words, the factors of perceived value can be weighted diversely depending on consumers. Building trust in customers through fair pricing has a positive long-term effect. Another important factor noted by several authors is the packaging of the product, with its different functionalities to ease and to communicate with consumers. There is no doubt about the increasing importance of packaging as a strategic tool to attract consumers' attention and their perception of the product quality (Deliya & Parmar 2012). Packaging materials and shapes are also found to attract attention; in fact, pictures on packages are emphasized to attract attention particularly when consumers are not very familiar with the brands (Vieira 2015). Authors like Silayoi and Speece (Silayoi 2007) argue that packaging innovations should be designed in such a way that the product can be handled without damaging the quality of the contents; furthermore, Deliya & Parmar (2012) add that packaging should also be designed to promote product sales. Innovative packaging may add value to the product if it meets a consumer need, such as portion control, recyclability, tamper proofing, child-proofing, easy-open, easy-store, easy-carry and non-breakability (Deliya & Parmar 2012). Advertising is also an important marketing element in the bottled water industry and everyone should realize the role that advertising plays in modern life (Kotler 2012). In today's dynamic world, it is almost impossible

for advertisers to deliver an advertising message and information to buyers without the use of advertising. Certainly, this may be because of the globalization and accessibility of hundreds of channels for the viewers of this modern era. Today, people mostly rely on advertisements rather than other sources (Zhang 2015). Consumers are spending all that extra money on billions of gallons of bottled water because they have bought into the beverage industry's marketing magic that water in a plastic bottle is safer and health-ier than tap water (About Food & Water Watch 2007) According to Collins and Wright (Collins & Wright 2014), advertisements represent bottled water as being a healthy alternative to tap water. The bottled water industry has become extremely profitable over the last decade; therefore, the consumer experience with a product is a significant factor. From all aforementioned factors, the main ones continually highlighted and defined as significant by the authors in regard to bottled water are:

- Interactive marketing;
- Advertising;
- Innovative packing;
- Trust in product;
- Perceived Value;
- Price;
- Quality;
- Brand name;
- Taste and odor.

Since consumers must choose between many bottled water brands, they are always challenged to consider not one but several factors before choosing their brand of bottled water. For most of aforementioned researchers, depending on the location where the study was conducted, findings were always different from each other. Therefore, researchers cannot always identify and define universal factors that will influence all customers in choosing their bottled water and this phenomenon occurs mainly because of the following circumstances:

- Differences in the environment and the circumstances where the water is processed and bottled;
- Differences in the attitude and behavior of consumers where the bottled water is sold.

The fact that influential factors in choosing any particular bottled water brand may be different depending from the environment, conditions and circumstances where the water is sold increases the importance of the study and therefore is another reason why each market deserves attention.

## 3. Research Methodology

The methodology of this research study is quantitative. The data were obtained through a survey of random consumers from Kosovo. The survey was conducted with the help of fifteen volunteer students from the Marketing Department at the Faculty of Economics, Hasan Prishtina University of Prishtina. The very same students have participated in a pilot study of the questionnaire, because of which the questionnaire was refined and corrected. Consumer participation in the interview was completely on a voluntary basis and in cases when respondents didn't answer, additional respondents were approached.

This study focuses on consumers in Kosovo, selecting the largest cities (included in this study) with a total population of 940 743 according to the Kosovo Agency of Statistics (ASK 2017). The number of questionnaires was calculated according to the Yamane formula (Yamane 1973):

 $n = N / (1 + N (e^{2}))$ 

Based on the sample size calculations, the result we obtained was =  $399.94 \approx 400$ .

Regarding the size of the sample (Tabachnick & Fidell 2007), advise that 50 cases are very poor, 100 is poor, 200 is fair, 300 is good, 500 is very good and 1 000 or more is excellent.

As a result, we collected a total of 500 questionnaires, which means 100 more questionnaires than the sample size number; this also in compliance with the advice of Tabachnick and Fidell.

The survey was conducted in a 1-month period from July to August 2017.

The factor analysis is based on a correlation matrix using the principal component extraction method with a varimax rotation and a Kaiser-Meyer-Olkin adequacy test. The purpose of these analyses is to eliminate irrelevant factors or those that have less impact. The results were presented in the tables for statistical analysis and interpretation. The analysis was conducted using the SPSS program version 20.0 for the Windows OS.

### 4. Factor Analysis

The initial factors that were used in the questionnaire were originated mainly from a review of literature, discussions, interviews and consultations with experts in the field. Our initial factors derived from the perspective of consumers and bottled water manufacturers. A principal component analysis approach was used to reduce a large set of factors to a smaller number of underlying factors called the principal components (or factors) that enable the comparison and interpretation of the same later. The extracted factors were interpreted according to their correlation with their initial variables and then the analysis enabled us to synthesize the information contained in those variables by identifying the most important ones.

| Glass<br>packed                                | -0,131                            | -0,112                        | 0,065                       | 0,137     | 0,299  | 0,21              | 0,3            | 0,189    | 0,07          | 0,119             | 0,126        | 0,324               | 0,08            | 0,165          | 0,213    | 0,344                 | 0,098  | 0,334               | 0,253       | 0,266                 | 0,183      | 0,073         | 0,086                         |               |
|--|-----------------------------------|-------------------------------|-----------------------------|-----------|--------|-------------------|----------------|----------|---------------|-------------------|--------------|---------------------|-----------------|----------------|----------|-----------------------|--------|---------------------|-------------|-----------------------|------------|---------------|-------------------------------|---------------|
| Water<br>con-<br>tent/<br>compo-<br>sition     | 0,068                             | 0,242                         | 0,032                       | 0,323     | -0,32  | 0,064             | -0,145         | -0,115   | -0,359        | 0,352             | 0,158        | -0,317              | -0,045          | -0,278         | -0,231   | -0,112                | 0,064  | 0,001               | -0,002      | 0,239                 | 0,216      | 0,04          | -                             |               |
| Easy to<br>Carry                               | 0,031                             | -0,14                         | 0,041                       | 0,079     | 0,066  | 0,303             | 0,189          | 0,081    | 0,166         | 0,102             | 0,29         | 0,047               | 0,402           | 0,164          | 0,022    | 0,189                 | 0,091  | 0,032               | 0,014       | 0,303                 | 0,033      | -             | 0,04                          |               |
| Prefer-<br>ence                                | 0,233                             | 0,209                         | -0,19                       | 0,21      | -0,119 | -0,218            | -0,274         | -0,145   | -0,046        | 0,253             | 0,075        | -0,164              | -0,081          | 0,065          | -0,138   | -0,265                | -0,021 | 0,279               | 0,298       | 0,671                 | -          | 0,033         | 0,216                         | 001.0         |
| Has<br>nealing<br>abili-<br>ties               | 0,117                             | 0,077                         | -0,086                      | 0,355     | 0,019  | 0,032             | -0,068         | 0,009    | 0,006         | 0,455             | 0,285        | 0,007               | 0,126           | 0,037          | -0,074   | -0,039                | 0,134  | 0,356               | 0,345       | -                     | 0,671      | 0,303         | 0,239                         |               |
| Local brand                                    | -0,025                            | 0,055                         | -0,028                      | 0,113     | 0,056  | -0,139            | 0,123          | 0,021    | 0,029         | 0,209             | -0,083       | 0,124               | -0,051          | 0,007          | 0,045    | 0,15                  | 0,284  | 0,739               | -           | 0,345                 | 0,298      | 0,014         | -0,002                        |               |
| nterna-<br>tional<br>brand                     | 0,027                             | 0,07                          | -0,084                      | 0,23      | 0,174  | -0,106            | 0,153          | 0,162    | 0,164         | 0,265             | 0,057        | 0,214               | -0,084          | 0,096          | 0,121    | 0,236                 | 0,318  | -                   | 0,739       | 0,356                 | 0,279      | 0,032         | 0,001                         |               |
| Price  | -0,286                            | -0,092                        | -0,012                      | 0,327     | 0,163  | 0,044             | 0,203          | 0,45     | 0,054         | 0,257             | 0,095        | 0,171               | 0,06            | 0,206          | 0,266    | 0,443                 | -      | 0,318               | 0,284       | 0,134                 | -0,021     | 0,091         | 0,064                         | 000 0         |
| Safety<br>for the<br>health                    | -0,24                             | -0,225                        | 0,118                       | 0,026     | 0,418  | 0,28              | 0,479          | 0,335    | 0,182         | 0,044             | 0,225        | 0,443               | 0,308           | 0,359          | 0,402    | -                     | 0,443  | 0,236               | 0,15        | -0,039                | -0,265     | 0,189         | -0,112                        |               |
| Fla-<br>vored                                  | -0,184                            | 0,023                         | -0,11                       | 0,04      | 0,314  | 0,206             | 0,593          | 0,55     | 0,212         | -0,02             | 0,071        | 0,342               | -0,057          | 0,251          | -        | 0,402                 | 0,266  | 0,121               | 0,045       | -0,074                | -0,138     | 0,022         | -0,231                        |               |
| Plastic<br>Packed                              | 0,103                             | 0,032                         | -0,233                      | -0,009    | 0,454  | 0,069             | 0,2            | 0,237    | 0,514         | 0,014             | 0,181        | 0,45                | 0,233           | -              | 0,251    | 0,359                 | 0,206  | 0,096               | 0,007       | 0,037                 | 0,065      | 0,164         | -0,278                        | 174.0         |
| Handy<br>acking                                | -0,216                            | -0,249                        | 0,215                       | -0,042    | 0,176  | 0,307             | 0,192          | 0,024    | 0,184         | 0,049             | 0,275        | 0,07                | -               | 0,233          | -0,057   | 0,308                 | 0,06   | -0,084              | -0,051      | 0,126                 | -0,081     | 0,402         | -0,045                        | 000           |
| The<br>source<br>origin                        | -0,052                            | -0,219                        | 0,041                       | 0,001     | 0,742  | 0,36              | 0,484          | 0,322    | 0,49          | 0,002             | 0,115        | -                   | 0,07            | 0,45           | 0,342    | 0,443                 | 0,171  | 0,214               | 0,124       | 0,007                 | -0,164     | 0,047         | -0,317                        |               |
| Pro-<br>cessing                                | 0,066                             | 0,061                         | -0,015                      | 0,272     | 0,057  | 0,274             | 0,152          | 0,109    | 0,255         | 0,386             | -            | 0,115               | 0,275           | 0,181          | 0,071    | 0,225                 | 0,095  | 0,057               | -0,083      | 0,285                 | 0,075      | 0,29          | 0,158                         | 701.0         |
| Brand<br>ecogni-<br>tion                       | 0,039                             | 0,308                         | -0,075                      | 0,596     | -0,059 | -0,005            | 0,031          | 0,1      | -0,085        | -                 | 0,386        | 0,002               | 0,049           | 0,014          | -0,02    | 0,044                 | 0,257  | 0,265               | 0,209       | 0,455                 | 0,253      | 0,102         | 0,352                         | 0110          |
| Adver-<br>tise-<br>ment                        | 0,001                             | -0,121                        | -0,118                      | -0,131    | 0,472  | 0,188             | 0,313          | 0,354    | -             | -0,085            | 0,255        | 0,49                | 0,184           | 0,514          | 0,212    | 0,182                 | 0,054  | 0,164               | 0,029       | 900'0                 | -0,046     | 0,166         | -0,359                        | 10.0          |
| Quan-<br>tity                                  | -0,397                            | -0,11                         | 0,027                       | 0,187     | 0,417  | 0,236             | 0,573          | -        | 0,354         | 0,1               | 0,109        | 0,322               | 0,024           | 0,237          | 0,55     | 0,335                 | 0,45   | 0,162               | 0,021       | 600'0                 | -0,145     | 0,081         | -0,115                        | 001.0         |
| acking<br>/olume                               | -0,295                            | -0,184                        | 0,17                        | 0,023     | 0,446  | 0,466             | -              | 0,573    | 0,313         | 0,031             | 0,152        | 0,484               | 0,192           | 0,2            | 0,593    | 0,479                 | 0,203  | 0,153               | 0,123       | -0,068                | -0,274     | 0,189         | -0,145                        | с с           |
| Alter-<br>native<br>Water                      | -0,303                            | -0,289                        | 0,308                       | 0,134     | 0,417  | -                 | 0,466          | 0,236    | 0,188         | -0,005            | 0,274        | 0,36                | 0,307           | 0,069          | 0,206    | 0,28                  | 0,044  | -0,106              | -0,139      | 0,032                 | -0,218     | 0,303         | 0,064                         | 50.0          |
| Design   | -0,226                            | -0,231                        | 0,119                       | -0,019    | -      | 0,417             | 0,446          | 0,417    | 0,472         | -0,059            | 0,057        | 0,742               | 0,176           | 0,454          | 0,314    | 0,418                 | 0,163  | 0,174               | 0,056       | 0,019                 | -0,119     | 0,066         | -0,32                         |               |
| Promo-<br>tion                                 | -0,026                            | 0,168                         | -0,155                      | -         | -0,019 | 0,134             | 0,023          | 0,187    | -0,131        | 0,596             | 0,272        | 0,001               | -0,042          | -0,009         | 0,04     | 0,026                 | 0,327  | 0,23                | 0,113       | 0,355                 | 0,21       | 0,079         | 0,323                         | 7010          |
| Avail-<br>ability<br>in the<br>shop            | -0,412                            | -0,39                         | -                           | -0,155    | 0,119  | 0,308             | 0,17           | 0,027    | -0,118        | -0,075            | -0,015       | 0,041               | 0,215           | -0,233         | -0,11    | 0,118                 | -0,012 | -0,084              | -0,028      | -0,086                | -0,19      | 0,041         | 0,032                         | 0.065         |
| Con-<br>sump-<br>tion on<br>daily<br>bases     | 0,365                             | -                             | -0,39                       | 0,168     | -0,231 | -0,289            | -0,184         | -0,11    | -0,121        | 0,308             | 0,061        | -0,219              | -0,249          | 0,032          | 0,023    | -0,225                | -0,092 | 0,07                | 0,055       | 0,077                 | 0,209      | -0,14         | 0,242                         | C F F O       |
| Diversi-<br>ication<br>of the<br>same<br>brand | -                                 | 0,365                         | -0,412                      | -0,026    | -0,226 | -0,303            | -0,295         | -0,397   | 0,001         | 0,039             | 0,066        | -0,052              | -0,216          | 0,103          | -0,184   | -0,24                 | -0,286 | 0,027               | -0,025      | 0,117                 | 0,233      | 0,031         | 0,068                         | 1010          |
|  | Diversification of the same brand | Consumption on daily<br>bases | Avaliability in the<br>shop | Promotion | Design | Alternative Water | Packing volume | Quantity | Advertisement | Brand recognition | E Processing | 편 The source origin | ල Handy packing | Plastic Packed | Flavored | Safety for the health | Price  | International brand | Local brand | Has healing abilities | Preference | Easy to Carry | Water content/<br>composition | Class and cod |

TABLE 1. A correlation matrix of variables studied.

After the execution of the analysis, to decide about whether we should keep all the variables in our model or eliminate any, first we have studied the variables to identify the ones that are poorly correlated with all the other variables.

The correlation coefficient takes values from -1.00 to 1.00 and calculates whether there is a relationship between variables and what level. For example, the figure shows that there is a strong positive relationship of 0.739 between local water brand variables with that of the international brand and a weak negative relationship of -0.139 between the local brand and alternative water sources (see Table 1).

Since we have identified several such variables in our model, before we made any decision, we also ran the Kaiser-Meyer-Olkin measure and Bartlett's Test of Sphericity that told us whether the overall correlation between the initial variables is strong enough or not.

| KMO and Bartlett's Test                            |                    |          |  |  |  |  |  |  |  |
|--|--------------------|----------|--|--|--|--|--|--|--|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy746 |                    |          |  |  |  |  |  |  |  |
|  | Approx. Chi-Square | 5564.835 |  |  |  |  |  |  |  |
| Bartlett's Test of Sphericity                      | Df                 | 276      |  |  |  |  |  |  |  |
|  | Sig.               | .000     |  |  |  |  |  |  |  |

TABLE 2. The adequacy test of the model.

The KMO value is .746, which means that our sampling adequacy is medium. The p-value of Bartlett's test of sphericity is lower than 5%; therefore, we refuse the null hypothesis and conclude that the correlation among variables in our model is significant.

The measure of how much of the variance for the observed variables are explained by a factor is known as the Eigenvalue. Feild (2009) explains that an Eigenvalue that equals to or greater than one describes more variance than a single observed variable. Exploratory factor analysis in our data leads to the identification of six factors the Eigenvalues of which are > 1 and explain 64% of the variation out of twenty-four initial variables that we had in the beginning (see Table 3).

Deciding on how many factors need to be retained is known as extraction (Feild, 2009). For the extraction process, we have applied the so-called Kaiser criteria, according to which only the factors the Eigenvalues of which are higher than 1 were retained. We have also reviewed the Evrard extraction criteria, according to which the component that corresponds with the turning point in the screen chart signifies the last variable that should be included and retained for the final solution (see Figure 1). The plotting of each Eigenvalue against the associated factor on a graph is known as a scree plot.

This way, our final solution contains the correlation coefficient of six extracted components (factors) out of twenty-four initial variables, which are coded with numbers from one to six.

| Total Variance Explained |       |              |         |       |             |          |                                 |          |         |  |  |  |
|--------------------------|-------|--------------|---------|-------|-------------|----------|---------------------------------|----------|---------|--|--|--|
| Com-                     | In    | itial Eigenv | alues   | Ex    | traction Su | ms of    | <b>Rotation Sums of Squared</b> |          |         |  |  |  |
| ponent                   | ļ     |              |         | So    | uared Load  | lings    | Loadings                        |          |         |  |  |  |
|                          | Total | % of         | Cumula- | Total | % of        | Cumu-    | Total                           | % of     | Cumula- |  |  |  |
|                          |       | Variance     | tive %  |       | Variance    | lative % |                                 | Variance | tive %  |  |  |  |
| 1                        | 5.013 | 20.888       | 20.888  | 5.013 | 20.888      | 20.888   | 3.720                           | 15.502   | 15.502  |  |  |  |
| 2                        | 3.429 | 14.287       | 35.175  | 3.429 | 14.287      | 35.175   | 2.579                           | 10.746   | 26.248  |  |  |  |
| 3                        | 2.242 | 9.343        | 44.518  | 2.242 | 9.343       | 44.518   | 2.510                           | 10.458   | 36.706  |  |  |  |
| 4                        | 1.934 | 8.059        | 52.577  | 1.934 | 8.059       | 52.577   | 2.314                           | 9.641    | 46.347  |  |  |  |
| 5                        | 1.674 | 6.974        | 59.551  | 1.674 | 6.974       | 59.551   | 2.250                           | 9.374    | 55.721  |  |  |  |
| 6                        | 1.173 | 4.890        | 64.441  | 1.173 | 4.890       | 64.441   | 2.093                           | 8.720    | 64.441  |  |  |  |
| 7                        | .983  | 4.094        | 68.535  |       |             |          |                                 |          |         |  |  |  |
| 8                        | .947  | 3.945        | 72.480  |       |             |          |                                 |          |         |  |  |  |
| 9                        | .841  | 3.505        | 75.985  |       |             |          |                                 |          |         |  |  |  |
| 10                       | .730  | 3.044        | 79.029  |       |             |          |                                 |          |         |  |  |  |
| 11                       | .641  | 2.670        | 81.699  |       |             |          |                                 |          |         |  |  |  |
| 12                       | .605  | 2.520        | 84.220  |       |             |          |                                 |          |         |  |  |  |
| 13                       | .557  | 2.322        | 86.541  |       |             |          |                                 |          |         |  |  |  |
| 14                       | .480  | 2.001        | 88.542  |       |             |          |                                 |          |         |  |  |  |
| 15                       | .422  | 1.757        | 90.299  |       |             |          |                                 |          |         |  |  |  |
| 16                       | .387  | 1.612        | 91.912  |       |             |          |                                 |          |         |  |  |  |
| 17                       | .334  | 1.390        | 93.302  |       |             |          |                                 |          |         |  |  |  |
| 18                       | .299  | 1.247        | 94.549  |       |             |          |                                 |          |         |  |  |  |
| 19                       | .264  | 1.102        | 95.651  |       |             |          |                                 |          |         |  |  |  |
| 20                       | .248  | 1.034        | 96.685  |       |             |          |                                 |          |         |  |  |  |
| 21                       | .237  | .988         | 97.672  |       |             |          |                                 |          |         |  |  |  |
| 22                       | .205  | .856         | 98.528  |       |             |          |                                 |          |         |  |  |  |
| 23                       | .184  | .765         | 99.293  |       |             |          |                                 |          |         |  |  |  |
| 24                       | .170  | .707         | 100.000 |       |             |          |                                 |          |         |  |  |  |

#### TABLE 3. Extracted variance.

Extraction Method: Principal Component Analysis.



FIGURE 1. Scree plot results of the Evrard selection criteria.

|                             | C         | omponent | Matrix <sup>a</sup> |   |   |   |  |  |  |
|-----------------------------|-----------|----------|---------------------|---|---|---|--|--|--|
|                             | Component |          |                     |   |   |   |  |  |  |
|                             | 1         | 2        | 3                   | 4 | 5 | 6 |  |  |  |
| Packing volume              | .755      |          |                     |   |   |   |  |  |  |
| Design                      | .749      |          |                     |   |   |   |  |  |  |
| The source origin           | .732      |          |                     |   |   |   |  |  |  |
| Safety for the health       | .706      |          |                     |   |   |   |  |  |  |
| Quantity                    | .663      |          |                     |   |   |   |  |  |  |
| Flavored                    | .583      |          |                     |   |   |   |  |  |  |
| Advertisement               |           |          |                     |   |   |   |  |  |  |
| Alternative Water           |           |          |                     |   |   |   |  |  |  |
| Plastic Packed              |           |          |                     |   |   |   |  |  |  |
| Glass packed                |           |          |                     |   |   |   |  |  |  |
| Has healing abilities       |           | .758     |                     |   |   |   |  |  |  |
| Brand recognition           |           | .717     |                     |   |   |   |  |  |  |
| Preference                  |           | .660     |                     |   |   |   |  |  |  |
| Promotion                   |           | .629     |                     |   |   |   |  |  |  |
| International brand         |           | .586     |                     |   |   |   |  |  |  |
| Local brand                 |           |          |                     |   |   |   |  |  |  |
| Availability in the shop    |           |          | .573                |   |   |   |  |  |  |
| Water Composition           |           |          |                     |   |   |   |  |  |  |
| Handy packing               |           |          |                     |   |   |   |  |  |  |
| Processing                  |           |          |                     |   |   |   |  |  |  |
| Easy to Carry               |           |          |                     |   |   |   |  |  |  |
| Diversification of the same |           |          |                     |   |   |   |  |  |  |
| brand                       |           |          |                     |   |   |   |  |  |  |
| Consumption on daily bases  |           |          |                     |   |   |   |  |  |  |
| Price                       |           |          |                     |   |   |   |  |  |  |

Extraction Method: Principal Component Analysis.

a. 6 components extracted.

From the component Matrix in Table 4, to get a clear factor structure and to ensure that we have no significant cross-loadings, as Feild (Feild 2009) has explained, we have applied a varimax factor rotation analysis, the results of which are shown in Table 5.

As we have requested from the application, only coefficients with an absolute value greater than > .55 are presented.

The analysis resulted in a clear factor structure, and, as a conclusion, we came to these points:

- 1. The first factor is cross-linked with the variables that have to do mainly with Quality, like the source of water, packing design, packing volume and product advertisement.
- 2. The second factor is cross-linked with variables related with Marketing, like promotion, brand recognition and water composition.

|                                      | Ro        | tated Comp | onent Matrix | xa   |      |      |  |  |  |  |
|--------------------------------------|-----------|------------|--------------|------|------|------|--|--|--|--|
|                                      | Component |            |              |      |      |      |  |  |  |  |
|                                      | 1         | 2          | 3            | 4    | 5    | 6    |  |  |  |  |
| The source origin                    | .821      |            |              |      |      |      |  |  |  |  |
| Design                               | .795      |            |              |      |      |      |  |  |  |  |
| Packing volume                       | .659      |            |              |      |      |      |  |  |  |  |
| Advertisement                        | .571      |            |              |      |      |      |  |  |  |  |
| Flavored                             |           |            |              |      |      |      |  |  |  |  |
| Alternative Water                    |           |            |              |      |      |      |  |  |  |  |
| Glass packed                         |           |            |              |      |      |      |  |  |  |  |
| Plastic Packed                       |           |            |              |      |      |      |  |  |  |  |
| Promotion                            |           | .733       |              |      |      |      |  |  |  |  |
| Brand recognition                    |           | .727       |              |      |      |      |  |  |  |  |
| Water Composition                    |           | .686       |              |      |      |      |  |  |  |  |
| Local brand                          |           |            | .847         |      |      |      |  |  |  |  |
| International brand                  |           |            | .810         |      |      |      |  |  |  |  |
| Has healing abilities                |           |            | .588         |      |      |      |  |  |  |  |
| Preference                           |           |            | .583         |      |      |      |  |  |  |  |
| Price                                |           |            |              | .783 |      |      |  |  |  |  |
| Quantity                             |           |            |              | .621 |      |      |  |  |  |  |
| Safety for the health                |           |            |              |      |      |      |  |  |  |  |
| Availability in the shop             |           |            |              |      | 785  |      |  |  |  |  |
| Diversification of the same<br>brand |           |            |              |      | .630 |      |  |  |  |  |
| Consumption on daily<br>bases        |           |            |              |      | .599 |      |  |  |  |  |
| Handy packing                        |           |            |              |      |      | .774 |  |  |  |  |
| Easy to Carry                        |           |            |              |      |      | .713 |  |  |  |  |
| Processing                           |           |            |              |      |      |      |  |  |  |  |

#### TABLE 5. The Varimax-rotated component matrix.

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 11 iterations.

- 3. The third factor is cross-linked with variables that have to do with Consumer Perception, like the local brand, international brand, has the water having healing properties and preferences.
- 4. The fourth factor is cross-linked with variables that have to do with Price, like price and quantity.
- 5. The fifth factor is cross-linked with variables that have to do with Preference: availability in the shop, the diversification of the same brand and consumption on daily bases.
- 6. The sixth factor is cross-linked with variables that have to do with Practicality: handy packaging and the water being easy to carry around.

#### 5. Discussion and Conclusion

This research intends to contribute to water treatment producers in Kosovo by providing new knowledge to bottled water producers, positioning themselves in the new competitive environment. Survey findings have been analyzed to find out what are the factors that customers consider most when choosing a brand of bottled water. The results of the study were achieved through a letter-based paper with random clients in Kosovo. Of the twenty-four variables extracted from the literature review using the exploratory factor analysis, we have identified the level of significance of each individual variable and thus have taken six important factors that affect it.

People who buy bottled water are affected by the brand, water quality and packaging. It is important that these factors be maintained in the drinking water business. Entrepreneurs in that business need to ensure that their companies are working well for these factors. First, they should offer an attractive, consistent and well-known brand of their product to consumers. Second, they should ensure that the novelty of water treatment can improve product quality while maintaining the taste and good smell of water. After that, they also should worry about packaging the product (the bottle in this case). Based on the above findings, people like to have bottles that are easy to carry, store and open.

In conclusion, the findings recognize the literature review, namely that the factors such as Quality, Marketing, Consumer Perception, Price, Preferences and Practice are the main factors influencing customer decision-making when choosing a brand of bottled water. Water bottle manufacturers, in designing their marketing plans and strategies, will focus more on considering factors like Quality, Marketing, Consumer Perception, Price, Advantages and Practices to generate profit and be successful in the operating their businesses.

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