

MENTARI RAHDINI

President University, Indonesia

MUTIARA AISYAH

President University, Indonesia

SURESH KUMAR

President University, Indonesia

FACTORS THAT INFLUENCE PEOPLE BUYING DECISION ON BOTTLED DRINKING WATER

Abstract:

There are various types of bottled drinking water in Indonesia market. Water is essential for human life. Nowadays, to meet people needs in daily life to drink water, many companies provide bottled drinking water. As this industry growing and more competition happen, the companies have to know the things that influence people to buy the products which are bottled drinking water. The aim of this research is to analyze several factors that influence people buying decision on it, namely brand, quality of the water, and the packaging of the product. Quantitative research was chosen as the methodology, with questionnaires distributed to gain the primary data. The questionnaires were distributed to 300 undergraduate students of President University in Cikarang, West Java, Indonesia. The questionnaires distribution was done in President University's campus and student housing area. Based on the survey result, it is proven that brand, quality of the water, and the packaging of the product influence the respondents' buying decision on bottled drinking water. The companies' owners as well as management have to understand that fact well. Thus, this research result can be used by entrepreneurs who are currently in bottled drinking water business and also for those who want to open the business in this industry.

Keywords:

bottled drinking water, brand, buying decision, packaging, quality, innovation

JEL Classification: L26, O31

Introduction

Nobody lives without water. There are many benefits of water, and the most important one is to hydrate human body. It is commonly known that we should drink two liters of water per day. It is also known that 75% of human body consists of liquid. In other words, water is crucial for human live. Along with that fact, there are now many companies produce bottled drinking water.

Nowadays, people can find bottled drinking water almost everywhere. The products vary, in term of brand, packaging, and other characteristic. In Indonesia, there are some well-known brands of bottled drinking water, such as Aqua and Vit from PT Tirta Investama, Prim-a from PT Sinar Sosro, Cleo from PT Sariguna Primatirta, and others. The products are easy to be found in the market. It is available from small shops until hypermarkets. The packaging is various, starting from 330 ml until 1500ml per bottle. Price and other characteristic are also different, depend on the brand.

The demand of bottled drinking water in Indonesia increases continuously. Recently, stated by Suhardi (2010), the average growth rate of the demand is around 10-12% in a year. Given the fact that there are many brands of bottled drinking water, the need of drinking water is not the only factor that influences people to buy the products. There must be other reasons why people buy the bottled drinking water or tend to buy it based on the brand.

Several factors are examined to find out what can affect people decision on buying bottled drinking water related to the innovation used by the companies. Deliya and Parmar (2012) were two researchers who have done similar research in Patan, India. Their research has proven that packaging influences people in buying the products. Meanwhile, in Czech, Foret and Procházka (2006) were also conducting a research on what factors which influence people buying decision on beverage. The findings of those researches have shown the relationship between brand, quality and packaging towards people buying decision.

The research was quantitative by nature since questionnaires were distributed to conduct the survey. The survey itself was done in Cikarang, West Java with President University students as survey respondents. The result can be one of the resources for people in the related business to understand the factors that influence customers buying decision and react accordingly. In analyzing the survey result, descriptive analysis was used to explain the demography of the respondents. Meanwhile, inferential analysis was used to check the reliability and validity of the independent variables based on the survey data and multiple regression analysis was used to find out the relationship between independent variables (product innovation) and dependent variables which is people buying decision.

Furthermore, the content of this research paper will be the review of literature which discusses about the related variables and the relationship between them, then description about detailed methodology used in the research. Next, the research result analysis will be explained before the discussion about summary of the result, implication, and recommendation for future research.

Review of Literature

According to International Bottled Water Association (2012), bottled water is defined as water that is consumed by human and packaged in bottled or other kind of containers. In addition, the water's can only be added safe and antimicrobial agents. That definition is also being used for drinking water. Meanwhile, mineral water has different definition. One of other sources (International Bottled Water Association, 2012) mentioned that mineral water is water which contains total dissolved solids more than 250 parts per million from certain sources that protected underground. Another definition comes from Department of Health, New York State (2006) that bottled water is water as product which is contained in bottles or other packages and can be added chemicals, and then it is sold for consumption or culinary within the country.

According to Kotler and Armstrong (2010), there are several stages in buyer decision process:

- Need recognition: the consumers realize that there is a need of something.
- Information search: the consumers are really attracted to find more information related to the need.
- Alternative evaluation: the consumers try to criticize the information they got to create the decision.
- Purchase decision: the customers decide to buy a certain brand.
- Post purchase behavior: the costumers are being loyal to the brand or change their preference due to the level of satisfaction.

This research was focusing on how product innovation can influence people in deciding which bottled drinking water to be bought. Innovation itself, according to Zimmerer and Scarborough (2005), described as kind of ability in solving problems and utilizing opportunities to enhance or enrich people's lives in creative manner. Giving additional value to that definition, as cited by Leigh Buchanan (2002) in his article "Built to Invent", Peter Drucker (1909-2005) stated that "Innovation is the specific tool of entrepreneurs, the means by which they exploit change as opportunity for a different business or a different service." So, related to this research, innovation has a meaning that creativity is influencing business in how entrepreneurs catching the opportunities.

One of the factors that influence people buying decision is product brand, which defined by Kotler and Armstrong (2010) as "A name, term, sign, symbol, design, or a combination of these that identifies the products or services of one seller or group of sellers and differentiates them from those of competitors". Related to the buyer decision process, it will appear mostly in "information search" and "alternative evaluation". At those stages, customers are trying to find and criticize the information about the product they need (in this case, bottled drinking water).

In bottled drinking water industry, there are any types of water treatment so that the water can be drunk. Surely, water treatment affects the quality of the water. APEC Water stated that one of the treatments is water purification, which results on the best quality water. The good and consistent taste is the important reason why it is the best one. Furthermore, Dvorak and Skipton (2008) described that distillation is an effective water purification method and it can produce well-tasted water. World Health Organization (1997) explained that besides taste,

odor and color (clarity) of the water is also reflect the water quality and may affect consumers' perception. Thus, water odor and clarity can influence people buying decision on bottled drinking water. The survey for this research tried to identify how quality of the product (bottled drinking water) influence people buying decision on it.

Besides the water quality, this research paper will discuss about innovation in terms of bottled drinking water packaging. Based on Kotler and Amstrong (2010), packaging is about the design and production activities of the product's wrapper. Deliya and Parmar (2012) state that there are several indicators of innovative packaging, which are how easy the packaging is to be recycled, to be brought/held, to be stored, and even how easy it is to be opened. It is also mentioned (Deliya and Parmar, 2012) that packaging durability is also the part of the packaging innovation. This research tried to analyze how the packaging innovation of bottled drinking water affects people buying decision on it.

Based on the explanation above, there are three hypotheses:

H1: there is a relationship between people buying decision and product brand.

H2: there is a relationship between people buying decision and product quality.

H3: there is a relationship between people buying decision and product packaging.

Research Methods

The target population of this research was the students of President University. The unit of analysis was the individual students. Bottled drinking water is important part of students' daily activities. Demanding schedule and quality concern become the main causes that students prefer to buy bottled drinking water. Furthermore, for those who are living in the student housing, there is one more constraint which is "no cooking allowed" so that they must buy the bottled drinking water. Indeed, bottled drinking water is demanded product for President University students. However, there are many brands of bottled drinking water there. President University students come from various backgrounds, so that it is reasonable that they could represent the market segment of bottled drinking water.

The sampling technique was convenience sampling. That technique was chosen in order to get broader result. Malhotra (2010) stated that convenience sampling is the easiest technique. By using this non probability technique, there were more respondents who could participate in the survey and it allowed the researchers to get more realized sample size in a short period of time.

According to Malhotra (2010), the minimum sample size for market research should be 200 to 500. Because of that, there were 300 samples collected from the survey. Questionnaires were used to conduct the survey. The questionnaires were distributed to the President students. In that area, it was relatively easy to find as well as ask the respondents to fill and give back the questionnaire right away. Besides that, it is also to avoid response error made by the respondents. The survey itself was conducted in the 5th week of October until 1st week of November 2013.

The questionnaire distributed consisted of 16 statements and the respondents had to choose one out of five responses provided for each statement. The available responses were ranged

from 1 until 5 which represent respondents' agreements toward the statements (1 for "strongly disagree", 2 for "disagree", 3 for "neutral", 4 for "agree" and 5 for "strongly agree"). The statements were categorized based on the factors that were being researched. As stated in the Introduction, this research tried to identify the factors that influence people buying decision on bottled drinking water.

In order to measure the relationship between the independent and dependent variables, inferential statistics were used to do data analysis. Software SPSS 20 was being used to obtain the analysis. First, there was validity test to show whether the statements in the questionnaire is right to be asked or not. It is suggested (Stevens, 2009) that a statement is considered valid if the factor analysis is more than 0.4. After that, there was reliability test to indicate whether the statements can be used for other samples in the same population or not. The reliability of the statements is determined by the value of Cronbach's Alpha. Zaiontz (2013) explained that if value of Cronbach's Alpha is more than 0.6, the statement is accepted as reliable. At the end, multiple regression analysis was being used to determine how the changes in independent variables influence the dependent variable. To run the multiple regression analysis, there are several assumptions to be passed. Those are normality, interval/ratio, no multicollinearity, and no heterocedasticity.

Result

In the 5th week of October until 1st week of November 2013, questionnaires were distributed and there were 300 respondents who became the respondents of the survey. From the respondents' personal data, it is found that around 62.33% of them are female. For the age, around half of the respondents are between 19-21 years old and the second highest numbers are those who are 16-18 years old (38.33%). The rest are those who are more than 21 years old. Besides that, the respondents mostly are coming from batch 2011 and 2013, which are up to 64.67% of total respondents.

In order to know the influence of brand, product quality, and product packaging in people buying decision, there were 16 statements asked in the survey. Each statement was given along with five-scale option to be chosen. After tabulating the responses from the respondents, there was several data analysis done.

First data analysis is validity test which was run to know whether the statements were right to be asked or not. The test was done through factor analysis using SPSS 20 software. Malhotra (2010) explained that statements are valid if they have KMO Measure of Sampling Adequacy more than 0.5 and significance level less than 0.05. Based on those two requirements, the statements used in this survey were valid. However, there is another requirement which is about communalities that should be above 0.5, according to Field (2013). Through the first validity test, there were four statements which could not fulfill those requirements, so they were deleted. After that, the validity test was re-run and new data passed it with Rotation Sums of Squared Loadings cumulative percentage 69.28%.

The second data analysis is reliability test for each component (independent variable). The purpose of this test was to know whether the statements in the questionnaire can be used for other sample in the same population or not. Based on the data which passed validity test, all of

the components or variables are reliable since they have the Cronbach's Alpha value more than 0.6.

Tabel 1. Loading factor and Cronbach's Alpha value

Brand		Quality		Packaging	
BR1	0,830	QU2	0,731	PA2	0,742
BR2	0,770	QU4	0,876	PA3	0,824
BR3	0,780			PA4	0,838
BR4	0,646				
$\alpha=0,803$		$\alpha= 0,601$		$\alpha= 0,085$	

After all variables (independent as well as dependent) passed the validity and reliability test, multiple regressions were used to identify the correlation between the independent variables and dependent variable. To check that all independent variables (brand, quality, and packaging) influence the dependent variable (people buying decision), the significance level suggested by Pallant (2011) should be less than 0.05 in the ANOVA table. In this research, the significance level is 0.001. To know the influence partially (each independent variable towards dependent variable), the significance level of each variable should be less than 0.05 in the coefficient table (Jones, 2013). The table below shows the result in this research. All of the variables have lower significance level.

Tabel 2. ANOVA Table

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	82.360	3	27.453	112.534	.000 ^b
	Residual	72.211	296	.244		
	Total	154.571	299			

a. Dependent Variable: BUYAV

b. Predictors: (Constant), PAAV, QUAV, BRAV

According to Pallant (2011), to conduct multiple regression analysis, there are three assumptions should be passed: linearity, heteroscedasticity, and multicollinearity. Linearity test is passed since the data are scattered around diagonal line of P-P plot, the data are proven to be homogeneous since the data are spread above and below zero on all parts of scatter plot/graph, and no multicollinearity problem where the tolerance is close to one and VIF value is around one.

From the value of adjusted R^2 generated from SPSS 20 software, it is indicated that brand, quality, and packaging contribute 58.2% in people buying decision on bottled drinking water. Other influence is contributed by other variables that have not been researched here.

Tabel 3. Coefficient Table

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	.518	.231		2.243	.026					
BRAV	.463	.044	.492	10.603	.000	.668	.525	.421	.734	1.362
QUAV	.147	.050	.131	2.941	.004	.421	.168	.117	.794	1.260
1 PAAV	.282	.050	.267	5.632	.000	.559	.311	.224	.702	1.425

a. Dependent Variable: BUYAV

Discussion and Conclusion

People buying decision on bottled drinking water is affected by brand, quality of the water, and the packaging. It is important to maintain those three factors in bottled drinking water business. The entrepreneurs in that business should ensure that their companies are working on those factors well. First, they have to provide attractive, consistent, and well-delivered branding of their product to the customers. Second, they have to assure that water treatment innovation can improve their product quality while maintaining the good taste and smell of the water. After that, they also have to concern about the packaging of the product (in this case is bottle). Based on the finding above, people like to have the bottle that easy to be carried, stored, and opened.

The finding has proved that the hypotheses stated earlier in this research paper are all accepted.

H1: there is relationship between people buying decision and product brand.

H2: there is relationship between people buying decision and product quality.

H3: there is relationship between people buying decision and product packaging.

A research done by Foret and Procházka (2006) had found similar result that there is relationship between people buying decision and product brand, product quality as well as product packaging. Furthermore, Deliya and Parmar's research (2012) also found that people buying decision is influenced by product innovation, especially in the packaging. Actually, there are more factors that influence people buying decision on bottled drinking water. Because of time and other limitation, those other factors have not been researched here.

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