A STUDY ON FACTORS INFLUENCING TO CHOOSE THE SELECTED BRANDS OF PACKAGED DRINKING WATER IN ERODE DISTRICT

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1.1 INTRODUCTION
All living things need water. The Earth is full of water. Water is the most essential element, next to air, to our survival. Water makes up more than two thirds of the weight of the human body, and without it, we would die in a few days. It has helped form the Earth as we know it, and it covers over 70 per cent of the Earth. Drinking water needs of individuals vary depending on the climate, body culture and physical activity. Unfortunately sufficient safe clean water is not available everywhere in the country. Water may be contaminated due to harmful chemical substances found in the layers of the earth or by pathogenic micro-organism. Consumption of contaminated water causes many water-borne diseases. Due to these reasons, it has become imperative to process and purify drinking water. Hence, the researcher has felt that it is important to study factors influencing to choose the selected brands of packaged drinking water in Erode district.

1.2 STATEMENT OF THE PROBLEM
Water is a basic need for human beings. Without water, existence of life on earth is not possible. There have been a number of social and economic factors like ever growing industrial activities, economic growth associated with globalization, growth of population and irregular rain, which have created non availability of drinking water. Consumption of contaminated water causes many water-borne diseases. Thus the present study have been undertaken to identify to study factors influencing to choose the selected brands of packaged drinking water in Erode district.

1.3 SCOPE OF THE STUDY
The present study attempts to assess the various factors influencing the customer to choose the selected brands of packaged drinking water. The study is confined only to branded packaged drinking water.

1.3 OBJECTIVE OF THE STUDY
1.   To ascertain the factors influence the customers to select a particular brand of packaged drinking water.

1.4 REVIEW OF LITERATURE
Review of Literature is the study of the prevalent materials related to the topic of the research. This helps the researcher to get a clear idea about the particular field. Following are some of the related literature that are reviewed and enlisted for the current study.

K.M.Chinndorai, B.Chitra(2013)[1] have conducted that A study on Brand influence on purchase of packaged Drinking Water, with the objectives of studying the awareness level of customers about the different brands of Packaged Drinking Water and the brand influence of customers towards purchase of Packaged Drinking Water. Out of 250 respondents, A maximum of (37%) the respondents are aware of Packaged Drinking Water through television advertisements.

John (2010) [2] in his study made an attempt to know the reason for many companies to invest in producing bottled water from the point view of customers. Th2e study revealed that many companies launched their brands as bottled water in view of good response from the customers.

Suven sahib,Evian(2010)[3] conducted a study on packaged drinking water regarding consumption and demand. The study revealed that there have been a lot of enquiries from consumers and lot of interest in buying health natural mineral water. However they are particular that it must clean water even if they have to shell out extra money for the same.

1.5 RESEARCH METHODOLOGY
The validity of any research depends on the systematic methods of collecting the data and analyzing the same in a sequential order. The instrument used for the data collection was Interview Schedule. The drafted interview schedule was circulated among various research experts for a critical view with regard to its content, format and the sequence. The Interview schedule was redrafted in the light of their comments. The Interview schedule was pre-tested with a few samples (25 respondents) among the selected sample respondents in the study area.

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1.5.1 PERIOD & AREA OF THE STUDY
The study was conducted during the month of Sep- 2015 in Erode District of Tamilnadu.

1.5.2 SAMPLING DESIGN
Simple random sampling technique was adopted for collecting packaged drinking water. Erode district was purposively selected. This district was divided was divided into 14 blocks. Entire 14 blocks were taken for study. In each blocks 10 customers who were using branded packaged drinking water is selected on convenient basis and in total the sample size of the study is fixed at 140.

1.5.3 SOURCES OF DATA
The study is based on the data collected from primary and secondary sources. The primary data were collected from sample respondents through Interview Schedule.

Secondary data was collected from the existing Literature available, various issues of magazines and journals, newspapers, articles, books and online etc..,

1.5.4 TOOLS FOR DATA ANALYSIS
In order to find the most important factors which are influencing to choose the selected brands of packaged drinking water in erode district factor analysis were used.

1.6 DISCUSSION
Factor Analysis
A sample of 140 respondents was taken for the study. The data collected for the study were classified, tabulated and processed for factor analysis which is the most appropriate multivariate technique to identify the group of determinants. Factor analysis identifies common dimensions of factors from the observed variables that link together the seemingly unrelated variables and provides insight into the underlying structure of the data. In this study Principal component Analysis has been used since the objective is to summarize most of the original information in a minimum number of factors for prediction purpose.

A Principal Component Analysis is a factor model in which the factors are based on the total variance. Another concept in factor analysis is the rotation of factors. Varimax rotations are one of the most popular methods used in the study of simplify the factor structure by maximizing the variance of a column of pattern matrix. Another technique called latent root criteria is used. An Eigen Value is the column sum of squares for a factor. It represents the amount of variance in data. After determination of the common factors, factor scores are estimated for each factor. The common factors themselves are expressed as linear combinations of the observed variables.

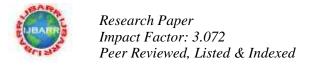Factor Model : $F_i = W_{i1}X_1 + W_{i2}X_2 + \ldots\ldots\ldots.. W_{ik}X_k$
Where F_i = Estimate of the ith factor, W_1= Weight or Factor score coefficient
k = Number of variables.

Ten factors are considered for measuring on a five point scale. Factor matrix and their corresponding factor loading after the Varimax rotation are presented in the table.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.479
Bartlett's Test of Sphericity	Approx. Chi-Square	52.792
	Df	45
	Sig.	.198

Communalities		
	Initial	Extraction
Brand image	1.000	.381
Price	1.000	.622
Quality	1.000	.669
Quantity	1.000	.664
Taste	1.000	.711
Advertisement	1.000	.566

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Availability	1.000	.649
Hygiene	1.000	.475
Packing	1.000	.156
Friends & Relatives	1.000	.616
Extraction Method: Principal Component Analysis.		

In Table Bartlett's test of sphericity and KAISER MEYER OLKIN measures of sample adequacy were used to test the appropriateness of the factor model. Bartlett's test was used to test the null hypothesis that the variables of this study are not correlated. Since the approximate chi-square satisfaction is 52.792 which is significant at 1% level, the test leads to the rejection of the null hypothesis.

The value of KMO statistics (0.479) was also large and it revealed that factor analysis might be considered as an appropriate technique for analyzing the correlation matrix. The communality table showed the initial and extraction values.

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.186	11.861	11.861	1.186	11.861	11.861	1.148	11.485	11.485
2	1.141	11.409	23.270	1.141	11.409	23.270	1.136	11.361	22.846
3	1.088	10.879	34.149	1.088	10.879	34.149	1.101	11.015	33.861
4	1.064	10.640	44.789	1.064	10.640	44.789	1.066	10.655	44.516
5	1.031	10.309	55.098	1.031	10.309	55.098	1.058	10.582	55.098
6	.994	9.944	65.042						
7	.954	9.544	74.586						
8	.918	9.184	83.770						
9	.816	8.164	91.934						
10	.807	8.066	100.000						
Extraction Method: Principal Component Analysis.									

From the table it was observed that the labelled "Initial Eigen Values" gives the EIGEN values. The EIGEN Value for a factor indicates the 'Total Variance' attributed to the factor. From the extraction sum of squared loadings, it was learnt that the I factor accounted for the variance of 1.186 which was 11.861%, the II factor accounted for the variance of 1.141 which was 11.409%, the III factor accounted for the variance of 1.088 which was 10.879%, the IV factor accounted for the variance of 1.064 which was 10.640%, the V factor accounted for the variance of 1.031 which was 10.309%. The five components extracted accounted for the total cumulative variance of 55.098%.

Determination of factors based on Eigen Values
In this approach only factors with Eigen values greater than 1.00 are retained and the other factors are not included in this model. The five components possessing the Eigen values which were greater than 1.0 were taken as the components extracted.

Component Matrix[a]					
	Component				
	1	2	3	4	5
Brand image	.573				
Price	.532				
Quality		-.575			
Availability					
Hygiene					
Packing					
Quantity			.741		
Advertisement				-.629	
Taste					-.574
Friends & Relatives					.551

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Extraction Method: Principal Component Analysis.				
a. 5 components extracted.				
Rotated Component Matrix^a				

	Component				
	1	2	3	4	5
Price	.727				
Brand image	.532				
Quality		-.732			
Availability		.720			
Hygiene			-.660		
Advertisement			.522		
Packing					
Friends & Relatives				.748	
Quantity				.543	
Taste					.834

Extraction Method: Principal Component Analysis.   Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 14 iterations.

Source: Computed from Primary data

The rotated component matrix shown in Table is a result of VARIMAX procedure of factor rotation. Interpretation is facilitated by identifying the variables that have large loadings on the same factor. Hence, those factors with high factor loadings in each component were selected. The selected factors were shown in the table.

Clustering of Inducing Varibales into Factors

Factor	Inducing Variable	Rotated factor loadings
AI (11.485)	Taste X5	0.834
	Friends & Relatives X10	0.748
BII(22.846)	Quality X3	0.732
	Price X2	0.727
CIII(33.861)	Availability X7	0.720
	Hygiene X8	0.660
DIV(44.516)	Quantity X4	0.543
	Brand image X1	0.532
EV (55.098)	Advertisement X6	0.522

Source: Computed from Primary data

In this table five factors were identified as being maximum percentage variance accounted. The variable X5 and X10constitutes factor I and it accounts for 11.485 per cent of the total variance. The variable X3 and X2 constitutes factor II and it accounts for 22.846 per cent of the total variance. The variable X7 and X8 constitutes factor III and it accounts for 33.861 per cent of the total variance. The variable X4 and X1 constitutes factor IV and it accounts for 44.516 per cent of the total variance. The variable X6 constitute factor V and it accounts for 55.098 per cent of the total variance.

CONCLUSION
The customer preference plays vital role in the success of every business. From the study, it is found that the various factors influencing to purchase then packaged drinking water were, taste and the influence of Friends and Family, Quality and Price, Availability and Hygiene, Quantity and Brand Image, and Advertisement. Hence it can be suggested to the packaged drinking water manufacturers to concentrate in the above factors to increase the customer loyalty and to achieve long term success in their business.

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