CHAPTER I

INTRODUCTION AND DESIGN OF THE STUDY

Introduction

Water is the most important necessity for life. Drinking water needs of individuals vary depending on the climate, body culture and physical activity. At the same time on an average, a human being requires two to four liters of water a day. 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. The demand for purified water has become more intensive, particularly in cities and towns. Packaged drinking water is widely used in offices, restaurants, hospitals and to a considerable extent in the households. So, there is great scope for packaged drinking water business.

Experts’ claim that India’s demand for water is one of the largest and most attractive water markets in the world and that by 2020, India's demand for water will exceed all sources of supply. In a developing country with vast requirements for water treatment and drinking water, there is a significant scope for growth. The total Indian water market is estimated to be about USD 4 billion consisting of drinking water/bottled water segment and wastewater treatment segment. While the Government sector contributes about 50 per cent of this, private industrial sector provides the remaining business. The Government sector is primarily involved in raw water treatment and sewage treatment operations. On the other hand, private industrial sector involves in equipments for chlorination, sludge treatment, aeration, disinfection, filtration and bottling. The overall water market is growing at an explosive rate of 15-20 percent annually, with the industrial and drinking water segments indicating even higher growth. According to a recent government assessment, “water requirement for industrial use will increase from the current 30 billion cubic meters to 120 billion cubic meters by 2025”. The bottled water market is one of the fastest growing segments in the country with a 55 per cent annual growth. India has devoted substantial resources to the water supply
and sanitation sector, significantly increasing its commitment since 1980 with the launch of the International Drinking Water Supply and Sanitation Decade. “Today, drinking water investments constitute about 3 per cent of the national budget. Due to these steps, today 85 per cent of the urban and per cent of the rural population has access to public water supplies. 48 per cent of the urban population and 36 per cent of the rural population has access to sanitation services”. But clearly, there exists scope and opportunity to do more.

Many people buy packaged drinking water, believing that it is safer than tap water. Estimates show that Indians spend about $330 million a year on bottled water. The packaged water market constitutes 15 per cent of the overall packaged beverage industry, which has an annual sale of at least $2.6 billion. Almost all the major international and national brands of packaged water are available in the Indian market right from the malls to the railway stations, bus stations, grocery stores and even at panwala shops.¹

**Statement of the Problem**

The Indian packaged drinking water market is very wide and active. The market share of packaged drinking water varies from location to location. Packaged drinking water has become an essential consumable product in the present era. The major challenge for most of the companies is product innovation and differentiation. It represents a key segment of the global beverage market. Market stimulants for bottled water include rising population, consumer spending patterns, lifestyle trends, and growing levels of health consciousness among consumers. Also, there is a marked increase in the demand for pure drinking water during travels and tours undertaken by the people. Ground water extraction has already crossed the critical limit in the city. Fast depleting ground water has to be recharged and revived for the packaged drinking water which heavily depends upon ground water than surface water in the city.

This research concept was motivated by the fact that there is a heavy competition in packaged drinking water of various brands. The demand for packaged drinking water is always on the increase due to its increasing rate of consumption. Hence the researcher felt that there is a need to examine the preference, awareness and satisfaction of

¹ [www.who-int-water-sanitation/health](http://www.who-int-water-sanitation/health)
consumers on the various brands of packaged drinking water. Though the demand for the packaged drinking water is increasing, the consumers may not always be satisfied about a particular brand of product on account of the competitive advantages of related brands, in terms of quantity, quality, price, and package, of different brands in the market.  

**Need for the Study**

Packaged drinking water has come into use by the consumers to a greater extent even though drinking water in Coimbatore is well known for its taste. Marketing of packaged drinking water in Coimbatore has been increasing year by year. Though water is priced marginally, consumers start using packaged drinking water not only during travel but also for normal consumption. It is observed that people have started using packaged drinking water even at home in large quantities and it has become one of their consumables. In this context, it is observed that more brands of packaged drinking water are available in the market. Under these circumstances, it is a felt necessity, to study the marketing, consumer perception, brand influence, preference of consumers towards packaged drinking water to help in taking measures to improve the quality, utility and satisfaction of the consumers.

**Research Questions**

In the last two decades there has been a major change in the structure of packaged drinking water market in Coimbatore, both on supply and demand aspects. The packaged drinking water sector has become the most dynamically developing sector of the domestic beverage business. Its consumption is increasingly sizeable. Among all food and beverage products, packaged drinking water shows the greatest increase in demand and sales. This is mainly due to the increasing purchasing power of consumers. The study analyses the following research questions:

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2 A note on mineral waters for the purpose of this thesis, mineral waters has been excluded. They are different product, and sold on a different premise, not unlike coffee and tea. Mineral water is usually sold on the basis of its mineral content. Bottled waters, on the other hand, are sold on the premise that the water is pure and has no other content. Mineral water does predate modern bottled water companies by a large margin. Bottled water companies are relatively recent, and have taken cues from the mineral companies. Interestingly, some bottled water companies have placing additives in their products to enhance their marketability in niche areas.
1. How do demographic factors of consumers’ influence the level of satisfaction on packaged drinking water?

2. Is there any association between education and environmental awareness of consumers’ on packaged drinking water?

3. What are the reasons for preferring a specific brand of packaged drinking water among consumers?

4. Is there any association between consumers with rented house and having a water purifier at home?

5. Which factors are influencing consumer perception towards packaged drinking water?

6. What are the opinions of dealers towards packaged drinking water business?

7. What are the factors influencing dealers to deal with a specific brand of packaged drinking water?

8. What are the Strengths, Weaknesses, Opportunities and Threats of packaged drinking water marketing?

**Broad Objectives of the Study**

The following are the primary objectives of the study:

(i) To identify the marketing of packaged drinking water in Coimbatore city.

(ii) To know the most important factors in the consumption patterns and decision-making among household consumers in Coimbatore city.

**Objectives of the Study**

1. To trace the origin, growth and development of packaged drinking water market.

2. To evaluate the influence of demographic factors of consumers on level of satisfaction and environmental awareness towards packaged drinking water.

3. To identify the reasons for preferring a specific brand of packaged drinking water among consumers.
4. To analyze the factors influencing consumers’ perception towards packaged drinking water.
5. To analyze the attitude of dealers towards packaged drinking water business.
6. To evaluate the strengths, weaknesses, opportunities and threats of packaged drinking water marketing.

Hypotheses

➢ There is no significant difference in the mean value of the demographic factors and level of satisfaction on packaged drinking water among respondents.

➢ There is no significant association between educational qualifications and awareness about the environment impact of packaged drinking water among respondents.

➢ There is no relationship between the factors influencing consumers’ perception towards packaged drinking water.

➢ There is no significant discrimination between gender and belief on packaged drinking water.

➢ There is no significant difference in the mean value of the nature of dealer and the opinion on packaged drinking water business.

Significance of the Research

The significance of this research expresses itself by being a helpful tool for marketers of packaged drinking water to direct marketing campaigns in the right way. In addition, there has been no research on packaged drinking water market in Coimbatore city.

Justification of the Research

This research is justified on the following grounds:

➢ Rapid growth of both global and local packaged drinking water market and consumer adoption rate: The worldwide growth of bottled water market creates numerous commercial opportunities for dealers and brand owners. Moreover, it is combined with growing health awareness of the general public.
Providing guidance for packaged drinking water marketing activities: The results of this research will provide potential benefits to packaged drinking water marketers, distributors or retailers. Marketing campaigns can be aimed more towards the present and potential customer by having the right information about the consumers.

Research Design

The study is based on empirical survey. The sample design is the most appropriate technique for analytical research when the population is large. A pretested interview schedule was administered to collect the opinion of the respondents. Every respondent is asked to answer the same set of structured and predetermined questions; coding, data treatment and interpretation were done.

Interview Schedule and Its Administration

Firstly, all questions and formats were standardized so that all respondents face the same interview schedule. Secondly, the interview schedule was designed comprehensively to extract pertinent information from the respondents. The interview schedule used for this research is included in appendix-A and appendix-B.

Measurement Scales Used

Closely related to the interview schedule, was selecting the format of response for measurement. The three types of measurement scales in the interview schedule of this research were nominal, ordinal and interval. Five Point Likert scale was used for measuring the opinion related to packaged drinking water.

Sampling Frame

Consumers

As packaged drinking water industry in Coimbatore city is an emerging one, the consumption of packaged drinking water in the city has been confined to the urban areas namely, municipalities and corporation of Coimbatore city. Data required for the present study were collected from 578 household consumers by adopting Simple Random sampling technique under probability sampling. The population was first segmented into mutually exclusive sub-groups. This type of sampling was considered as the most appropriate one for
this research because of two main reasons. Firstly, it enables the researcher to list relevant control characteristics and secondly, it determines the distribution of these characteristics in the targeted population, those who were buying packaged water. Secondly, the sampling process was reviewed in order to guarantee reliability, validity and readiness for analysis.

Dealers

A census method of data collection was used to collect first-hand information from the dealers. The total number of dealers were 103 which comprised of 28 producers-cum-distributors and 77 distributors. The dealers were approached for data collection, covering all different brands of packaged drinking water.

Figure- 1.1

**Sampling**

![Diagram of sampling process]

- **Coimbatore city**
  - East Zone 81254 Household
  - West Zone 64505 Household
  - South Zone 59609
  - North Zone 83880 Household
  - 162 Household
  - 129 Household
  - 119 household
  - 168 Household
  - 578 Household

Source: Coimbatore Corporation
Data sources

a) Primary data

The primary data were collected by field survey, through Interview Schedule in the study area. First-hand information pertaining to consumers buying behaviour was collected from 578 household consumers and 103 dealers as respondents to study their attitude, perception towards the purchase and marketing of packaged drinking water in Coimbatore city. The samples were taken from eleven geographical areas under four zones which cover the whole Coimbatore city. They were Ganapathy, Gandhipuram, Vadavalli, Singanallur, Ondiputhur, P.N.Puthur, Kavundampalayam, Peelamedu, Ramanathapuram, R.S. Puram and Town hall.

b) Secondary data

The secondary data and literature relating to the study was gathered from the national and international journals, magazines, articles and various website sources on the internet. A number of standard text books were also studied for the purpose of this research.

Pre-test

The interview schedule was pre-tested with 10 per cent of the respondents among the total sample respondents in the study areas. Taking into consideration the suggestion from the selected sample respondents, necessary modifications were incorporated in the final interview schedule after the pre-test.

Period of Study

An exploratory survey was conducted in the study area during September 2011, to develop the interview schedule. After making necessary corrections in the schedule, the detailed field survey was made from December 2011-May 2012.

Profile of the Study area

Coimbatore district is filled with naturally diverse eco-systems such as hills, plains, forests, evergreen fields, drought-prone areas, river bodies, tanks etc. Due to the presence of the mountain pass, major parts of the district are benefitted by the south-west monsoon. The pass which is commonly known as Palghat Gap has an enduring influence
on the trade and commerce that are centered in and around Coimbatore city. The third largest city of the state, Coimbatore, is one of the most industrialized cities in Tamil Nadu, known as the textile capital of South India or the Manchester of the South. The city is situated on the banks of the river Noyyal, Coimbatore existed even prior to the 2nd or 3rd century AD ruled by Karikalan, the first of the early Cholas. Among its other great rulers were Rashtrakutas, Chalukyas, Pandyas, Hoysalas and the Vijayanagara kings. When Kongunadu fell to the British, along with the rest of the state, its name was changed to Coimbatore and it is by this name that it is known today, except in Tamil, in which it is also called “Kovai”.

As per the census 2011, as many as 578 people are crammed on an average into every square kilometer of the district of Coimbatore. The population density in Coimbatore, one of the highly urbanized districts in the state, has gone up from 631 in 2001 to 748 per square km in 2011. The population of Coimbatore has gone up by over five lakhs in the last decade. The 2011 census puts the population at 34,72,578 while the previous count in 2001 claimed a population of 29,16,620.

Data analysis Strategy

The data collected through interview schedule was summarized and analyzed by using Statistical Package for Social Science (SPSS) version 17.0. SPSS enables accurate analysis and makes it relatively easy to interpret data. The following analyses of statistics were undertaken using SPSS for further analysis:

**Descriptive:**

Percentage, frequency, and mean are used to examine the demographic and personal variables of the respondents.

**Associative:**

Reliability

Z- Test

One-way Analysis of Variance (ANOVA)

Rank analysis
Average Score

Factor analysis

Discriminant analysis

Correlation

First, frequencies and descriptive statistics summarize the demographic and personal data of respondents to get an overview and to provide guidance for conducting further analysis. Secondly, Z-test, ANOVA, rank analysis, factor analysis, discriminant analysis and correlations among dependent and independent variables are carried out to identify the possible relationships.

Limitation of the Study

(i) The study was based on the primary data collected from the consumers and dealers by interview schedule. Since the respondents had not maintained any records about the consumption pattern and its variation, they furnished the required information retrieving it from their memory and experience. Accordingly, the collected data were subject to their ability and accuracy of recall.

(ii) The study dealt with household consumers only. It excluded corporate consumers.

(iii) Although a number of brands were being marketed in the study area, the researcher had confined the study only to the brands which were sold by the dealers in Coimbatore city. Further, the researcher had approached only the registered dealers who were dealing with brands which are accredited by the Bureau of Indian Standards (BIS) mark.

Operational Definitions

Belief : A descriptive thought that someone holds about something.

Packaged drinking water : Any product, including natural spring or well water, taken from municipal or private utility systems or other water, distilled water or any of the foregoing to which chemicals may be added, which are put into sealed bottles, packages or other containers, to be sold for domestic consumption or culinary use.
Consumer buying: The buying behavior of final consumer individuals and household consumer who buy goods and services for personal consumption.

Perception: The process by which people select, organize and interpret information to form a meaningful picture of the world.

**Abbreviations**

ABWI  Australian Bottled Water Institute  
ANOVA  Analysis of Variances  
USD  United States Dollars  
NRDC  National Resource Defense Council  
USA  United States of America  
$  Sign for United States Dollar  
SPSS  Statistical Package for Social Science

**Chapter Scheme**

The study report is presented in six chapters.

**Chapter 1** (Introduction and Design of the study) comprises of research problem, research questions, hypotheses, research design, tools applied, study area and period and limitations of the study.

**Chapter 2** (Review of literature) reviews the existing literature related to the subject field to develop a new concept to be tested by this research.

**Chapter 3** (Overview of packaged drinking water) presents an overview about packaged drinking water industries.

**Chapter 4** (Consumers’ Perception on Packaged Drinking Water) analysis on the statistical output regarding consumer level of satisfaction, consumer opinion and buying behaviour, consumer perception on packaged drinking water are presented in this chapter.
Chapter 5 (Dealers’ attitude on Packaged Drinking Water) analysis on findings regarding the opinion of the dealers on packaged drinking water business in Coimbatore city. The null hypotheses were tested by appropriate statistical tools.

Chapter 6 (Summary of Findings, Suggestions and Conclusion) consolidates the summary of the findings of the study and conclusion. The final chapter presents relevant recommendations on the basis of the analysis and findings.