CHAPTER I
INTRODUCTION AND DESIGN OF THE STUDY

1.1 INTRODUCTION

India is the world's fastest growing major economy and has already made it to the list of 10 biggest economies of the world. According to the International Monetary Fund, India is the ninth largest economy with a nominal GDP estimated at around US$ 2.04 trillion. In terms of the Purchasing Power Parity (PPP), India is the third largest economy with US$ 7.96 trillion, and that is what makes it one of the biggest markets in the World. The contribution of soft drinks industries to the Indian economy is remarkable one. India is a major manufacturer and importer of soft drink beverages. The Indian soft drink industry is vast and it has been rapidly growing by the day. No matter what time of the year soft drink beverages are consumed in great volume. According to official reports, the volume of soft drinks consumed in India stood at a whopping 11,755 million litres in 2013. These numbers suggest that there was an increase of about 170 per cent in the consumption of soft drinks in comparison to 2008. It is further expected that the sale of soft drinks may go up by annually 19 per cent till 2018. There are two leading competitors in the soft drink industry viz., PepsiCo India and Coca-Cola India.

Pepsi is one of the most popular and most widely consumed soft drink brands in India. It is the flagship brand of the PepsiCo India. Pepsi was introduced to India in 1990 and was an instant hit amongst the Indian youth. It grew in popularity rapidly and never looked back. According to the information given in the official website of PepsiCo India, Pepsi is loved by over 200 million people worldwide and is the largest selling soft drink brand in India.

Coca-Cola is the world's highest selling and most popular soft drink brand by far. However, Coca-Cola has not been able to make the same impression over the Indian people. Nevertheless, Coca-Cola is one of the most sought-after and largest selling soft drink brand in India. It is the signature brand of Coca-Cola India. Coca-Cola was re-launched in India in 1993 after a span gap of 16 years.
These two companies have introduced different brands of soft drinks in order to attract more consumers. In this perspective, the researcher aims to know to what extend the consumers of soft drinks in the major cities of Tamil Nadu are satisfied with their favourite soft drinks and the factors influencing them to prefer the branded soft drinks.

1.2 CONCEPTUAL FRAMEWORK

1.2.1 Concept of Consumer

Any individual who purchases goods and services from the market for his/her end-use is called a consumer. In simpler words, a consumer is one who consumes goods and services available in the market. A consumer is someone who can make the decision whether or not to purchase an item at the store and someone who can be influenced by marketing and advertisements. Any time someone goes to a store and purchases a toy, shirt, beverage, or anything else, they are making that decision as a consumer.

It can also be said that any person who enjoys the goods and services generated or produced by any organization is known as a consumer. When a person consumes any good and service according to his/her personal need or demand then he is the one who is sharing the activities generated by any company. Consuming according to ones need and demand is a tough task because here a person tries to get the best product or service.

Generally, when we talk about consumers, we usually stick on those particular people who consumes. Whereas, those people who are consuming any service provided by any firm are also known as consumers because they are also the part of that particular firm or organization. Every consumer is thus known as an important part because they are the only one who actually tells us how our product is working and how it is giving something special to them. According to the behaviour of consumers, companies do try to improve their performances and thus enhance their level depending on the needs and demands of every single consumer.

In law and politics, consumer’s protection laws are also imposed in order to protect their rights and to give them freedom of decision and choice too. Giving them rights is the only way that can lead towards any betterment and with the help of this process companies will
also come to know about their present position and will work further in order to improve their future position too.

1.2.2 Concept of Consumer Preference

Consumer preference is defined as a set of assumptions that focus on consumer choices that result in different alternatives such as happiness, satisfaction, or utility. The entire consumer preference process results in an optimal choice. Consumer preferences allow a consumer to rank different bundles of goods according to levels of utility, or the total satisfaction of consuming a good or service.

"Consumer preference" is a marketing term meaning a consumer likes one thing over another. For instance, a trend may indicate consumers prefer using debit cards over credit cards to pay for goods. Consumer preference is used primarily to mean to select an option that has the greatest anticipated value among a number of options by the consumer in order to satisfy his/her needs or desires. Preferences indicate choices among neutral or more valued options available. The preference of the consumer is the result of their behaviour they show during searching, purchasing and disposing the products. Consumer preferences are defined as the personal tastes, as measured by utility, of various bundles of goods. They permit the consumer to rank these bundles of goods according to the levels of utility they give the consumer.

The preferences are independent of income and prices. Ability to purchase goods does not determine a consumer's likes or dislikes. In other words, the consumer has different preferences over the different combinations of goods defined by the set of commodity bundles. Consumer preferences are measured in terms of the level of satisfaction the consumer obtains from consuming various combinations or bundles of goods. The consumer's objective is to choose the bundle of goods which provides the greatest level of satisfaction as they the consumer define it. But consumers are very much constrained in their choices. These constraints are defined by the consumer's income, and the prices the consumer pays for the goods. Consumer value is measured in terms of the relative utilities between goods and these reflect the consumer's preferences. It is important to understand
that consumer preferences are not dependent upon consumer income or prices. So a consumer's capacity to buy goods does not reflect a consumer's likes or dislikes.

1.2.3 Concept of Brand

According to Seth Godin\(^1\), a **brand** is the set of expectations, memories, stories and relationships that, taken together, account for a consumer’s decision to choose one product or service over another. If the consumer (whether it’s a business, a buyer, a voter or a donor) doesn’t pay a premium, make a selection or spread the word, then no brand value exists for that consumer. ‘A **brand** is ‘the intangible sum of a product’s attributes: its name, packaging, and price, its history, its reputation, and the way it’s advertised’**-David Ogilvy\(^2\). Moreover, Al Ries\(^3\) defines **brand** that it is a singular idea or concept that one who owns inside the mind of a prospect **whereas** according to Haigh Robert\(^4\) ‘a brand (or marque for car model) is a name, term, design, symbol, or other feature that distinguishes one seller’s product from those of others. Brands are used in business, marketing, and advertising’.

The American Marketing Association defines a brand as “A name, design, symbol or any other feature that identifies one seller’s good or services as distinct from those of other sellers. The legal term for brand is trade mark. A brand may identify one item, a firmly of items or all items of that seller. If used for the firm as a whole, the preferred form is trade name”. From the perspective of Ashely Friedlein\(^5\) - E consultancy, it is understood that a brand is the sum total of how someone perceives a particular organization. Branding is about shaping perception.

Ann Handley argues that Brand is the image. People have of your company or product. It’s who people think you are or quoting Ze-frank, it’s the “emotional after taste” that comes

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\(^5\)Ashley Friedlein Founder, E consultancy & Chairman, Ably London, United Kingdom
after an experience with a product service or company. A brand is the meaningful perception of a product, a service or even your self-good, bad or indifferent- that marketers want people to believe based on what they think they hear, see smell, taste and generally sense from other around them. Josh Moritz states that brand is the intangible sum of a product’s attributes; its name, packaging and price, its history, its reputation and the way it’s advertised. Al redefines brands “It’s a singular idea or concept that you inside the mind of a prospect”. According to Sergiozyman⁶, a brand is essentially a container for a customer’s complete experience with the product or company.

1.2.4 Concept of Branding

Branding refers the process involved in creating a unique name and image for a product in the consumer’s mind, mainly through advertising campaigns with a consistent theme. Branding aims to establish a significant and differentiated presence in the market that attracts and relations loyal customers.

‘Branding is the management process by which a product is branded. It is a general term covering various activities such as giving a brand name to a product, designing a brand mark and establishing and popularizing it’.

It is evident from the perspective of Margie Clayman that Branding is the encapsulation of a company’s mission statement, objectives and corporate soul as expressed through the corporate voice and aesthetic. But from the point of view of Gini Dietrich-Spin Sucks, branding to him is identifying of a product or service. It’s the name, the logo, the design or a combination of those that people use to identify and differentiate what they’re about it buys. However, Gini Dietrich-Spin Sucks further argues that a good brand should deliver a clear message, provide credibility, connect with customers emotionally, motive the buyer and create user loyalty.

In today’s social, customer-controlled world, marketers may be spending their money to build a brand. But they don’t own it. In their influential book, Groundswell, ChareneLi and

Josh Bernoff\(^8\) state “Your brand is whatever your customers say it is”. As marketers, this means that, while a brand is the emotional relationship between the consumer and the product, they must engage with consumers and build positive brand associations. But Neil Feinstein True North specifies that the deeper the relationship, the more brand equity exists.

1.2.5 Brand image and product image

Brand image is partially derived from a product image. The product image relates to the fundamental aims and satisfaction which the consumers find in a particular product. Therefore, it is not wrong to say that the brand image relates to the specific versions of the product image.

1.2.6 Branding decisions

Branding has become a management technique as it involves consideration of alternatives and choosing the best alternative. Some of the practical hints have been discussed above. Brand managers have to develop a local order of action in developing brand awareness and ultimately leading to Brand loyalty. Brand Preference – Making the consumers buying out of habit a particular brand.

1.2.7 Concept of soft drinks

The term “soft drink” though is now typically used exclusively for flavored carbonated beverages. This is actually due to advertising. Flavored carbonated beverage makers were having a hard time creating national advertisements due to the fact that what you call their product varies from place to place.

A soft drink characteristically contains carbonated water, a sweetener, and a natural or artificial flavouring. The sweetener may be sugar, high-fructose corn syrup, fruit juice, sugar substitutes or some combination of these. Soft drinks may also contain caffeine, colourings, preservatives and other ingredients.

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\(^8\)Charlene Li and Josh Bernoff, “Grounds well; winning in a World Transformed by Technologies” Harvard Business Press (2008)
Soft drinks are called "soft" in contrast to "hard drinks" (alcoholic beverages). Small amounts of alcohol may be present in a soft drink, but the alcohol content must be less than 0.5% of the total volume, if the drink is to be considered non-alcoholic. Fruit punch, tea, and other such non-alcoholic beverages are technically soft drinks by this definition but are not generally referred to as such.

Soft drinks may be served chilled, over ice cubes or at room temperature. In rare cases, some soft drinks, such as Dr Pepper, can be served warm. Soft drinks are available in many formats, including cans, glass bottles, and plastic bottles (the latter in a variety of sizes ranging from small bottles to large 2-liter containers). Soft drinks are also widely available at fast food restaurants, theatres, convenience, casual dining restaurants, and bars from soda fountain machines. Soda fountain drinks are typically served in paper or plastic disposable cups in the first three venues. In casual dining restaurants and bars, soft drinks are often served in glasses. Soft drinks may be drunk with straws or sipped directly from the cups.

Soft drinks are mixed with other ingredients in several contexts. In Western countries, in bars and other places where alcohol is served (e.g., airplanes, restaurants and nightclubs) many mixed drinks are made by blending a soft drink with hard liquor and serving the drink over ice. One well-known example is the rum and coke, which may also contain lime juice. Some homemade fruit punch recipes, which may or may not contain alcohol, contain a mixture of various fruit juices and soda pop (e.g., ginger ale). At ice cream parlours and 1950s-themed diners, ice cream floats are often sold. Two popular ice cream floats are the coke float and the root beer float, which consist of a scoop of ice cream placed in a tall glass of the respectively named soft drinks.

While the term "soft drink" is commonly used in product labelling and on restaurant menus, in many countries these drinks are more commonly referred to by regional names, including carbonated beverage, coke, fizzy drink, fizzy juice, cool drink, cold drink, lolly water, pop, seltzer, soda, soda pop, tonic, and mineral. Due to the high sugar content in typical soft drinks, they may also be called sugary drinks.

In the United States, the 2003 Harvard Dialect Survey tracked the usage of the nine most common names. Over half of the survey respondents preferred the term "soda", which was
dominant in the North-eastern United States, California, and the areas surrounding Milwaukee and St. Louis. The term "pop", which was preferred by 25% of the respondents, was most popular in the Midwest and Pacific Northwest, while the generalized trademark "coke", used by 12% of the respondents, was most popular in the Southern United States. The term "tonic" is hyper local to eastern Massachusetts, although usage is declining.

In the English-speaking parts of Canada, the term "pop" is prevalent, but "soft drink" is the most common English term used in Montreal. In the United Kingdom and Ireland, the terms "fizzy drink" and the generalized trademark "coke" are common. "Pop" and "fizzy pop" are used in northern England, while "mineral" is used in Ireland. In Australia and New Zealand, "Fizzy Drink" or "soft drink" is typically used. In South African English, "cool drink" and "cold drink" are used, but in Indian English "cool drink" is most prevalent.

However in India, Soft drinks are classified into major heads namely carbonated and non-carbonated drinks on the basis of their composition. A soft drink carbonated beverage is a non-alcoholic beverage that typically contains water, a sweetener, and a flavouring agent. The sweetener may be sugar, high-fructose corn syrup, or a sugar substitute (in the case of diet drinks). For e.g. Coca-Cola, Thumbs up, Mountain Dew, Sprite, 7Up, Marinda, Fanta, Limca, Appy Fizz, Grappo Fizz. Whereas non-carbonated drinks can be further classified into nectar and juices. Nectar is made from fruit or vegetables but with 25-99 % juice content and usually with added sugar and juice mostly contains natural fruit or vegetables. It is prepared by mechanically squeezing or macerating fresh fruits or vegetables. Juice is always 100 % fruit juice For example, Saint Juices, Real Fruit and Vegetable Juices, Tropicana Juices etc. to name a few.

1.3 STATEMENT OF THE PROBLEM

In the modern world, companies are running their business in high competitive market and ever changing environment. Because, in accordance with the consumers life style, their taste and preference are also changing day to day so that every organization has to make efforts to retain their consumers. Because, they are the kings in the market. They will
decide themselves what to buy, when to buy and where to buy. Soft drink companies in India are performing very well. These companies are launching varieties of drinks in different brand names in India. So it is necessary to soft drink companies to identify the factors which influence the consumers to prefer the soft drinks so as to enable the companies to take further steps to supply the consumers expected quality. In this perspective, the researcher undertakes a study on consumers’ preference towards branded soft drinks in major cities of Tamil Nadu. This study would be helpful to the manufactures to identify the consumer perception, taste, beliefs and behaviour for improving them to introduce new strategies and increase in sales.

1.4 IMPORTANCE OF THE STUDY

More than 2000 million rupees have been invested in Indian soft drink industry. There is a stiff competition between the carbonated drinks and non-carbonated drinks in the industry. A high growth has been noticed in the non-carbonated drinks in the last ten years. For that reason of this significant growth, many competitors have entered the market where a number of new brands have flooded. Besides, sellers of fresh and fruit Juices etc. have also captured a sizeable share of the market. As a result of these changes in the beverage market there is a need to identify and evaluate the reasons for the shift in the consumer purchasing pattern. The present study aims to find out the various factors influencing the consumer preference for purchase of branded soft drinks among the people of the major cities in Tamil Nadu. Moreover, since there is an increase in the competition between the two giant companies a need arises to understand the awareness levels towards various brands amongst the consumers in these cities. This research, of course, will be more useful to the soft drink companies in identifying the awareness levels of their respective brands and preference of the consumers towards branded soft drinks in the state of Tamil Nadu.

1.5 SCOPE OF THE STUDY

The study emphases on the consumer preferences of branded soft drinks in selected cities of Tamil Nadu. Consumer preferences are more complex and even more important not only manufacturers but also for retailers today than in past. In fact, it is an edge to understand what the consumers of soft drinks think of while they are buying their favourite soft drinks.
The study will help the manufacturers of soft drinks to understand the underlying consumer preferences factors and which factors mostly influence the consumers of the selected cities in the state and help them to craft their marketing strategies.

1.6 OBJECTIVES OF THE STUDY

Generally objectives are more specific and easier to measure than goals. Objectives are basic tools that underlie all planning and strategic activities. They serve as the basis for creating policy and evaluating performance. In this perspective, the objectives for the study have been framed and are presented as given below.

1. To identify the factors which effect on consumer preference towards the branded soft drinks in the selected cities of Tamil Nadu
2. To study the consumers’ awareness level of the soft drinks in Tamil Nadu
3. To analyze to what extent the advertisements inspire the consumers to consume the soft drinks
4. To assess the satisfaction level of people ‘at the time of’ and ‘after’ consuming the branded soft drinks in the selected cities of Tamil Nadu
5. To evaluate the awareness regarding the effect of soft drinks on health of consumers

1.7 HYPOTHESES OF THE STUDY

A hypothesis is a proposition which can be put to a test to determine its validity. It may seem contrary to or in accord with common sense. It may prove to be correct or incorrect. In any event however, it leads to an empirical test. Whatever the outcome, the hypothesis is a question put in such a way that an answer of some kind can be forthcoming. The function of the hypothesis is to state a specific relationship between phenomena in such a way that this relationship can be empirically tested. The basic method of this demonstration is to design the research so that logic will require the acceptance or rejection of the hypothesis on the basis of resulting data.
The following hypotheses have been framed for the study

- There is no significant influence of type of products over the frequency of purchasing the soft drinks
- There is no significant influence of demographic characters over the level of satisfaction with regard to size of packaging of the soft drinks
- There is no significant influence of demographic characters over the level of awareness of branded soft drinks
- There is no significant influence of demographic characters over the preference of branded soft drinks
- There is no significant association between the product and factors influencing to purchase preferred branded soft drinks
- There is no significant association between the product and attributes influencing to purchase preferred branded soft drinks
- There is no significant difference between the mean scores relating to the satisfaction of consumers with regard to attributes of the branded soft drinks.
- There is no significant difference between the mean scores relating to the satisfaction enjoyed “at the time of” and “after” consuming their favorite soft drinks.
- There is no significant difference between the mean scores and the opinion with regard to size of packaging the soft drinks.

1.8 RESEARCH METHODOLOGY

All items in any field of inquiry constitute a ‘Universe’ or ‘Population’. A complete enumeration of all items in the population is a census enquiry. It can be presumed that in such an enquiry, when all items are covered, no element of chance is left and highest accuracy is obtained. But in practice this may not be true. Even the slightest element of bias in such an enquiry will get larger and larger as the number of observation increases. Moreover, there is no way of checking the element of bias or its extent except through a
resurvey or use of sample checks. Besides, this type of enquiry involves a great deal of time, money and energy. When the field of enquiry is large, this method becomes difficult to adopt because of the resources involved. At times, this method is practically beyond the reach of ordinary researcher.

Further, many a time it is not possible to examine every item in the population and sometimes it is possible to obtain accurate results by studying only a part of total population. In such cases there is no utility of census survey. Under census method, each and every unit of the population or universe is studied. Census method will give more representatives, accurate and reliable results. Since it involves enormous amount of time and money, this method is not used for this research.

1.8.1 Sampling

Instead of obtaining information from each and every unit of the universe, only a small representative part is studied and the conclusions are drawn on that basis for the entire universe or whole population. Hence, this research uses sampling method for collecting data. For this research convenient sampling is used for collecting the data.

This sampling is judgment sampling as the interviewer can select the first few sample items quickly rather than going through the laborious process of obtaining a random sample. Samples are chosen simply because they are most readily available or accessible or easy to measure. In order to study consumers’ preferences towards the branded soft drinks in major cities of Tamil Nadu, 665 sample respondents have been selected from the selected cities of Tamil Nadu.

\[
\text{Required Sample size for Group} = \left( \frac{SS}{1 + \frac{SS - 1}{N}} \right)
\]

Where Sample size \( SS = \left( \frac{Z^2 \times p(1-p)}{C^2} \right) \),

\( Z = \) Standard normal value = 2.58 for 99 % confidence and 1.96 for 95 % confidence.

\( P = \) Percentage picking a choice normally 0.5,
C = Level of significance = 2.5 % = 0.025

Example

\[ SS = \left( \frac{2.58^2 \times 0.5(1-0.5)}{.05^2} \right) = \frac{1.6641}{0.0025} = 666 \]

Hence the Required Sample size = \( \frac{666}{1 + \frac{666 - 1}{15213745}} = \frac{384.16}{1.000044} = 665 \)

Table 1.1 describes the selection of samples based on population of the selected cities of Tamil Nadu. There are 12 cities in the state, out of which 6 cities are randomly selected. The number of samples to be collected from each city is decided based on the population of the city. In this context, the total samples to be collected would be 665. The data related to the study from the selected cities are collected arbitrarily by adopting random sampling method.

### TABLE 1.1

**Statement showing samples from the selected cities of Tamil Nadu**

<table>
<thead>
<tr>
<th>S. No</th>
<th>Cities</th>
<th>Area (Sq. Km)</th>
<th>Population (as per Census 2011)</th>
<th>Sample</th>
<th>Sample percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Chennai</td>
<td>178.20</td>
<td>8696010</td>
<td>380</td>
<td>57.14</td>
</tr>
<tr>
<td>2</td>
<td>Coimbatore</td>
<td>7469.00</td>
<td>2151466</td>
<td>94</td>
<td>14.13</td>
</tr>
<tr>
<td>3</td>
<td>Madurai</td>
<td>3741.73</td>
<td>1462420</td>
<td>64</td>
<td>9.62</td>
</tr>
<tr>
<td>4</td>
<td>Tiruchirapalli</td>
<td>4407.00</td>
<td>1021717</td>
<td>45</td>
<td>6.76</td>
</tr>
<tr>
<td>5</td>
<td>Thiruppur</td>
<td>5186.34</td>
<td>962982</td>
<td>42</td>
<td>6.31</td>
</tr>
<tr>
<td>6</td>
<td>Salem</td>
<td>5205.00</td>
<td>919150</td>
<td>40</td>
<td>6.01</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>15213745</strong></td>
<td></td>
<td><strong>665</strong></td>
<td>100</td>
</tr>
</tbody>
</table>

*Source: Secondary Data*
From the above Table, it is understood that exactly 57.14% of the total samples is drawn from Chennai whereas 14.13% of the samples is collected from Coimbatore. Besides, 9.62% of samples from Madurai, 6.76% from Tiruchirapalli and 6.31% from Tiruppur have been collected. In addition to the above, 6.01% of the samples are drawn from Salem.

1.8.2 Pilot study and pre – testing

In order to study the preference of branded soft drinks among the consumers in the selected cities of Tamil Nadu, data are collected by interview schedules. At the point of inception, a pilot study is planned and pre tested with a well-defined questionnaire. One of the main research instruments for collecting primary data is questionnaire. Questionnaire method helps in fulfilling several purposes, like measurement, descriptions and drawing inferences. The primary data is collected through the well framed questionnaire comprising optional type and Likert’s five point scales.

The main aim of the pilot study is to check the feasibility and reliability of the questionnaire which is used as a main tool of analysis. A tentatively well framed questionnaire is circulated among 50 respondents. The responses obtained are systematically transformed into the data spread sheet with suitable numerical coding. The Cronbache’s Alpha method is applied on the primary responses and found that the reliability value related to factors influencing the consumers to prefer the branded soft drinks, consumers awareness level of branded soft drinks, effectiveness of soft drink advertisements, satisfaction level of consumers at the time of and after consuming their favourite branded soft drinks and awareness regarding the effect of soft drinks on consumers health is observed as 0.67. This shows the reliability of the questionnaire circulated among the respondents. It is concluded out of these results that the questionnaire so framed is suitable in ascertaining the responses from the respondents.

1.8.3 Instruments for data collection

One of the main research instruments for collecting primary data is questionnaire. Questionnaire method helps in fulfilling several purposes, like measurement, descriptions and drawing inferences. The primary data is collected through the well framed questionnaire comprising optional type and Likert’s five point scales.
1.8.4 Sources of data

Two types of data have been used for the study viz., Primary data and Secondary data. Primary data refers to those data which are collected first hand by the investigator. Such data are original in character and are generated in a large numbers of surveys conducted, mostly by government and also by some individuals, institutions and research bodies. There are several methods of collecting primary data like survey method, observation method to name a few. In this research, survey method is used to collect the primary data through a well-designed questionnaire. In this method, the enumerator makes personal contacts with the informants either directly or indirectly and collects the required data. Various devices such as telephone, mailed questionnaire are used to collect information. As the enumerator is personally involved in collecting data, the information is more reliable and accurate. The data which are not originally collected but collected from either published or unpublished sources are called secondary data. In this research secondary data is also used.

1.8.5 Period of the study

The study is to be carried out by the researcher in a period of two years from April, 2015 to March, 2017. The primary data related to the study has been collected from April, 2016 to September, 2016.

1.9 TOOLS USED

The study results are analysed by using various statistical tools. The data collected from the respondents are examined and presented in the form of tables. Bar charts are used at various places as a statistical tool. The results are compared and analysed by using descriptive analysis and inferential analysis.

1.9.1 Descriptive analysis

Descriptive analysis, also termed as percentage analysis, is used for each question contained in the interview schedule mainly to ascertain the distribution of respondents under each category. Diagrams and charts are mainly used for clear understanding of the data collected in pictorial form. Pie-charts and bar charts are used for this purpose.
1.9.2 Non Parametric Friedman Test

The Friedman test is a nonparametric alternative to the repeated measures of analysis of variance. It is the non-parametric equivalent of a one-sample repeated measures design or a two-way analysis of variance with one observation per cell. Friedman tests the null hypothesis that k related variables come from the same population. In order to ascertain the factors that will influence the respondents Friedman test is used for analyzing to “Frequency of purchasing the soft drinks, Satisfaction level of consumers with regard to attributes of the branded soft drinks, level of satisfaction enjoyed “at the time of” and “after” consuming favorite soft drinks, level of satisfaction with regard to size of packaging the soft drinks”.

\[ G = \frac{12}{nK(K+1)} \sum R_j^2 - 3n(K+1) \]

1.9.3 Garrett’s ranking technique

To find out the most significant media of advertisement mostly influences the respondent to buy soft drinks; significant influence of Taste & Preference in preferring the branded soft drinks the Garrett’s ranking technique is used. As per this method, respondents have been asked to assign the rank for all factors and the outcomes of such ranking have been converted into score value with the help of the following formula:

**Percent position** = \( 100 \frac{(R_{ij} - 0.5)}{N_j} \)

Where \( R_{ij} \) = Rank given for the ith variable by jth respondents

\( N_j \) = Number of variable ranked by jth respondents

With the help of Garrett’s Table, the percent position estimated is converted into scores. Then for each factor, the scores of each individual are added and then total value of scores and mean values of score is calculated. The factors having highest mean value is considered to be the most important factor.
1.9.4 Chi-square analysis

The Chi-square analysis is used to test the significance of association between two attributes. In other words, this technique is used to test the significance of the influence of demographic characters over the flavour of soft drinks prefer to purchase, Average amount of money to be spent monthly by the respondents for the soft drinks, Reason for purchasing preferred branded soft drinks, attributes of products by which respondents are influenced to purchase soft drinks, reasons for not buying the soft drinks, type of packaged soft drinks the respondents wish to buy, awareness of offers and discounts of soft drinks, awareness of adulterated soft drinks available in the Market. All the tests are carried out at 5 per cent level of significance.

The chi-square statistic is

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

Here O: Observed frequency, E: Expected frequency

1.9.5 Average score analysis

Parametric test of two sample t-Test and One way analysis of variance for more than two groups are applied to for judging the significance of the difference between means scores, after testing the normality by Q-Q plot. The test for mean score analysis (ANOVA) test procedure is used to compares mean scores of more than two groups. The procedure assumes that the variances of the groups are equal and it was tested with Levene’s test statistics.

$$F = \frac{S_1^2}{S_2^2} \sim F_{(n_1-1), (n_2-2)} df$$

After converting the qualitative information into a quantitative one using a five point scale, the average scores are obtained on various issues to determine the factors influencing the of consumers with regard to attributes of the branded soft drinks, level of satisfaction enjoyed “at the time of” and “after” consuming favourite soft drinks, level of satisfaction with regard to size of packaging of the soft drinks. Parametric test of two samples Z-Test and One way analysis of variance for more than two groups are applied to for judging the
significance of the difference between means scores after testing the normality by Q-Q plot.

1.9.6 Independent-Samples T Test

The Parametric test of two samples Z-Test procedure is used to compare mean scores of two groups. The procedure assumes that the variances of the two groups are equal and it was tested with Levene’s test statistics.

\[
t = \frac{|\bar{X}_1 - \bar{X}_2|}{S \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \sim t_{n_1+n_2-2} \text{ df} \quad \text{where} \quad S = \sqrt{\frac{(n_1-1)s_1^2 + (n_2-1)s_2^2}{n_1+n_2-2}}
\]

The significant difference between the mean scores is tested with respect to the scores regarding factors influencing the of consumers with regard to attributes of the branded soft drinks, level of satisfaction enjoyed “at the time of” and “after” consuming favourite soft drinks, level of satisfaction with regard to size of packaging the soft drinks, the Z test procedure is used.

1.9.7 Multiple Regression analysis

Multiple regression analysis is used to find out the significant influence in Satisfaction level of consumers with regard to attributes of the branded soft drinks Taste, Price, Quality, Availability, Advertisement, Packaging, and Size.

The equation applied to find out the loyalty is as follows

\[
Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4
\]

Dependent variable \( Y = \text{Satisfaction level of consumers} \)

Independent variables are

- \( X_1 = \text{Taste} \)
- \( X_2 = \text{Price} \)
- \( X_3 = \text{Quality} \)
- \( X_4 = \text{Availability} \)
- \( X_5 = \text{Advertisement} \)
- \( X_6 = \text{Packaging} \)
- \( X_7 = \text{Size} \)
1.9.8 Discriminant Function Analysis

Discriminant Analysis is a statistical tool with an objective to assess the adequacy of a classification, given the group memberships; or to assign objects to one group among a number of groups. For any kind of Discriminant Analysis, some group assignments should be known beforehand. When Discriminant Analysis is used to separate two groups, it is called Discriminant Function Analysis (DFA) while when there are more than two groups – the Canonical Varieties Analysis (CVA) method is used. Discriminant Analysis has various benefits as a statistical tool and is quite similar to regression analysis. It can be used to determine which predictor variables are related to the dependant variable and to predict the value of the dependant variable given certain values of the predictor variables. Discriminant Analysis is also widely used to create Perceptual Mapping by marketers and has some benefits over other methods that use perceived distances; like the option of using tests of significance to check for dissimilarities among products and that the distances between two products would not be impacted by other products included in the study.

In order to find out how respondents preference towards PepsiCo Products differ from preferences of the respondents Coca-Cola Products, multivariate discriminant analysis is used. Do the attributes of the branded soft drinks, satisfaction with regard to size of packaging the soft drinks differ among these two groups? In general, what are all the variables which significantly discriminate the respondents of one group (PepsiCo Products) from other group (Coca-Cola Products) is identified through the multivariate discriminant analysis.

1.10 LIMITATIONS OF THE STUDY

In spite of various efforts being taken by the researcher for collecting data, the researcher confronted some challenges while doing this study. At the outset, majority of the respondents are not interested and negligent in filling the questionnaire. Some do not give values to the questionnaire and some others do not return it totally. Besides this, though orientations were given to the respondents, some people see the questionnaire diplomatically. Furthermore, since respondents have been in a tight work, some were not
as such willing to fill the questionnaires. Finally, since the respondents were strewn in different sites, some problems were faced in giving orientations, following up respondents and collecting responses. Therefore, these conditions might affect the quality of the thesis to a certain extent.

1.11 CHAPTERS SCHEME

On the basis of the objectives, the study is structured into five chapters including introduction and conclusion.

Chapter I titled ‘Introduction’ is introductory in nature. It introduces the conceptual aspects of consumer preference, Brand, Brand Image and Soft Drinks. It also deals with importance of the study, statement of the problem, hypothesis, objectives, methodology, limitations and chapter scheme.

Chapter II entitled ‘Review of Literature’ is devoted to present the review of literatures related to Consumer Preferences towards branded soft drinks and other products.

Chapter III entitled ‘Soft Drink Industry in India’ describes the growth and development of soft drink industry in India, Profile of the selected companies, their products and profile of the selected state.

Chapter IV entitled ‘Analysis and Interpretations’ looks at the analysis of data using various tools based on the objectives of the study. In this context, the chapter is divided into eight sections.

Chapter V entitled ‘Findings, Suggestions and Conclusion’ presents findings, of the research, suggestions drawn on the basis of the results of the study and conclusion.