CHAPTER 1

INTRODUCTION AND DESIGN OF THE STUDY
CHAPTER - I

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1.1 INTRODUCTION

In the Mid-20th century, many management philosophers believed that the purpose of a business is to create a satisfied customer. The marketplace has been undergoing changes under the converging pressures of demographics, global politics, economic upheavals, scientific advancements and social evolutions. Business organizations are not left apart from this change process. As the organizations undergo change, the role of marketing within the dairy sector has undergone a transformation. It is very well understood that every business organization should be organized around the least information and knowledge oriented systems for its survival in the modern age. Besides they should also be customer-focused, market-driven and flexible in its ability to deliver superior value to customers who are continuously modifying their definition of value.

Of late, the Indian corporate has started realizing the importance of customer oriented practices in their marketing strategies. Much of this strategic shift has been ascribed to the converging pressures of geopolitical realignment and to the emergence of the internet technology.
Even though such a shift would involve heavy resource commitments, monetary and otherwise, the Indian corporate have taken up this challenge as a part of their survival in a fast moving market driven economy.

**Consumer Behaviour**

The changing income demographics, age profile and macro environment are visible in the growth in consumption of products. Customers, themselves are changing, natural customer loyalty is a thing of past. Higher business risk owing to dynamism in customer's expectation, innovative strategies by the competitors and other macro level changes demand the contemporary managers to be strategic with regard to maintaining profitable customer relationship through product and process design, pricing, product mix and distribution decisions. It becomes very important for the marketing managers to study the behaviour of the target customers in a systematic way.

Generally speaking, behavior is the response to stimuli. For a consumer, the usual stimulus is a product - anything that possesses want-satisfying capability. In simple words, consumer behaviour can be defined as the set of activities and actions of consumer in purchasing and using goods and services. However, it involves a study of buying motives in
order to examine the selection criteria of the consumers for the products they choose and what motivates them to behave as they do in the market places. Consumer behavior focuses on how individuals make decisions to spend their available resources like time, money and effort on consumption related items.

1.2 IMPORTANCE OF THE STUDY

In consumable market like fluid milk market where the market is stable and where there is high switching and low involvement and low risk, consumer behavioral measures are appropriate for predicting future brand loyalty. Consumers are highly complex individuals, subject to a variety of physiological, psychological and sociological needs. Needs and priorities of different consumer segments differ drastically. In this competitive era, a large number of fluid milk is available under various brand names to consumers and the study examines the consumers’ order of preference and selection of the brand from the quantum. Consumers are extremely aware of the various brands in the market and are conscious of the products they use or consume. They pick and choose carefully according to their needs, economic conditions and preferences, etc.
The consumers believe that consumption of milk or milk products are only for affluent layers of the society and they are not aware that the milk possesses all the nutrition like calcium, fat, protein etc which are very much essential for hale and healthy body irrespective of age group.

Both the Government as well as the marketing divisions of dairy companies failed to create awareness among the mass through the advertisement or publicity. This is one of the major causes for poor demand in the study area. During the pilot study the researcher has observed that even the farmers having cattle farm are not consuming enough milk for their own needs rather directly send the milk to the union milk society or to the private milk industries. This shows not only the ignorance but also the financial and economic crisis of the farmers and the milch animal owners.

Based on the above issues the researcher probes the following questions.

1. To what extent the dairy industries taken steps to increase milk consumption among the public in the study area?

2. What strategies are adopted to increase the consumption volume of milk in the study area?
3. What steps are initiated by the Government and the dairy industries to create awareness on various facts of milk among public?

4. What are the steps taken by the dairy industries to satisfy the milk consumers?

5. What are the strategies adopted by the companies to sustain the brand loyalty of the consumers?

1.3 STATEMENT OF THE PROBLEM

Milk is one of the most important nutritious food which is normally consumed by all age group irrespective of rich and poor. The consumption of milk by consumers has been taken in various forms, such as raw milk, pasteurized milk and in the form of hot condition. In order to provide a good quality of milk without bacteria, the government itself can come forward to launch various dairies in the industry to supply high quality of milk to consumers in a highly hygiene conditions. Hence, a number of dairy industries were established in major cities and towns of Tamilnadu state. But a few group of public have not shown keen interest to purchase and consume branded milk like Aavin, Arokya, and Komatha etc. rather they prefer to buy the fluid milk directly from the unorganized milk vendors. This style of purchasing milk directly from the unorganized
vendors is popular because of a belief of fresh milk rather than milk stored in cold storage in dairy industry.

Further it is disheartening to note that, even the literate consumers do not prefer the standard brands of milk available in the study area. This is due to lack in knowledge of milk requirement for every human being to maintain good health and also the availability of standardized milk processed to meet the consumer demands in various categories such as fat free milk, toned milk and full cream milk.

It is learned from the observation study that 70% of the population in Salem district are not hale and healthy due to ignorance of consuming milk or milk products directly like North Indians.

While analyzing the marketing strategies practiced by the branded milk producers, it is obvious that they are not reaching properly to the consumers living in various geographical segments of study area. Moreover the present pricing policy practiced by the select dairy units are too exorbitant and the consumers of low income category and middle income category find somewhat difficult to consume a cup of milk for each member in a family. This policy may be changed in order to create more demand among the consumers.
Another important factor that affects the success of the branded milk marketers is the distribution and supplier behavior. Though the consumers are willing to buy branded milk, poor distribution system prevents them to do so. The milk packets are sold at select points only, that too at early hours both in morning and evening. Thus, many consumers find it difficult to buy at that time; consequently the consumers are suffering with non-availability of the Milk packets. Further, high demand and low supply of the branded milk packets make the vendors more lethargic and unfriendly behavior with the consumers. In turn, the attitude and perception about the branded milks are worsening.

In order to find solutions, the researcher has selected the topic “Study on Consumption Pattern and Buying Behaviour of Fluid Milk Consumers in Salem District”. The present study has two dimensions to it, viz.,

a) To study the **CONSUMPTION PATTERN** of the fluid milk consumers

b) To study the **BUYING BEHAVIOUR** of the fluid milk consumers
1.4 OBJECTIVES OF THE STUDY

1. To analyse the brand awareness, brand consciousness and brand loyalty level of the consumers.
2. To identify the factors influencing the brand preference and the level of satisfaction among fluid milk consumers.
3. To ascertain the consumers' opinion about the services of milk vendors of both organized and un-organized sectors.
4. To suggest appropriate marketing mix strategies to influence the consumption pattern and buying behavior of the branded fluid milk consumers.

1.5 RESEARCH METHODOLOGY

1.5.1 Research area of the study

The present study was carried out in Salem district. The study area covers high-density areas, where the fluid milk is mainly sold. Salem district lies 325 km to the south west of Chennai, the capital city of Tamilnadu. This site was chosen, since it constitutes the main market area for fluid milk product. For the purpose of the study only the branded milks like Aavin, Arokya and Komatha were taken. The geographical area chosen for the study is shown below both in pictorial and table form.
### RESEARCH AREA OF THE STUDY

**Salem District**

*Source: Map, www.tn.gov.in*

#### TABLE NO. 1.1

**AREA WISE SAMPLE DISTRIBUTION**

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Taluk</th>
<th>Sample Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Salem</td>
<td>120</td>
</tr>
<tr>
<td>2</td>
<td>Omalur</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Mettur</td>
<td>60</td>
</tr>
<tr>
<td>4</td>
<td>Edappadi</td>
<td>60</td>
</tr>
<tr>
<td>5</td>
<td>Sankari</td>
<td>60</td>
</tr>
<tr>
<td>6</td>
<td>Yercadu</td>
<td>60</td>
</tr>
<tr>
<td>7</td>
<td>Vazhappadi</td>
<td>60</td>
</tr>
<tr>
<td>8</td>
<td>Attur</td>
<td>60</td>
</tr>
<tr>
<td>9</td>
<td>Gangavalli</td>
<td>60</td>
</tr>
</tbody>
</table>

*Source: Primary Data*
1.5.2 Sampling frame

**Universe:** Branded fluid milk consumers of Salem district (only Households)

**Sampling Unit:** The sampling units were selected by covering all the nine Taluks of Salem district.

**Sample Size:** 600 Branded fluid milk consumers.

1.5.3 Sampling Design

The samples were carefully selected by the researcher, which were typical and true representatives of the total population. The selection of the samples has been made without prejudice and bias. The researcher has collected the list of revenue blocks from each Taluks of Salem district. Six hundred sample respondents were chosen based on stratified random sampling method from the revenue blocks.

1.6 DATA COLLECTION

1.6.1 Primary data

The primary instrument for data collection in this research was well-structured questionnaire. A detailed questionnaire has been prepared to know the consumption pattern and to seek the opinion of the fluid milk consumers who responded to the same.
Initially, before asking questions, a good rapport was established and good co-operation of the fluid milk consumers was solicited. Then the questions were asked in a structured order. Any doubt that the consumer had has been clarified so as to get the right answer from the consumers.

1.6.2 Secondary data

Secondary data were collected from previous Studies, Research Papers, Journals, Magazines, Text Books and from Web Resources.

1.6.3 Pilot Study

After the formulation of the questionnaire, Pilot study was conducted. A sample of 60 respondents from the population was selected. Based on the answering of the questionnaires and also based on the suggestions of the respondents, necessary modifications were incorporated in the instrument. Then the questionnaire was finalized, and circulated to the consumers.

1.6.4 Data analysis

Primary data (mainly quantitative) generated by the study were cleaned to ensure consistency and transcribed in coded form into the computer using the Statistical Package for Social Sciences (SPSS) for analysis.
1.6.5 Statistical Tools Used in Analysis

To analyze the level of preference among the milk brands, the data were collected from the different types of respondents based on their socio-economic factors such as Educational Qualifications, Occupation, Family Size, Monthly Income, Amount spent on milk per month, Type of Milk, Quantity of Milk Purchase, Place of Purchase and Mode of Payment which were studied by means of Percentage Analysis, Two-way tables, Averages, Ranges and Standard Deviation, Chi-square test, Multiple Regression Analysis, Multi Discriminate Analysis, Garrett Ranking and Factor Analysis. The different tools of analysis and the variables studied are briefly explained as follows.

Chi-Square Test

The degree of influence of the following independent variables pertaining to preference among the milk product.

i) Respondents' Educational Qualification

ii) Respondents' Occupation

iii) Respondents' Family Size

iv) Respondents' Monthly Income

v) Respondents' Amount spent on milk per month
vi) Respondents' Type of Milk

vii) Respondents' Quantity of Milk Purchase

viii) Respondents' Place of Purchase

ix) Respondents' Mode of Payment

In order to identify the factors influencing the respondents on consumption pattern and their level of preference to the milk product, a Chi-square ($\chi^2$) test was used, and the formula of Chi-square test is furnished below:

$$\text{Chi-square test (}\chi^2\text{)} = \sum \frac{(O-E)^2}{E}$$

Degrees of freedom = $(R-1)(C-1)$

whereas, $O$ = Observed Frequency

$E$ = Expected Frequency

$R$ = Number of Rows

$C$ = Number of Columns

Multiple Regression Analysis

Regression is a statistical tool used to measure the relationship between two or more variables. When there are two or more independent variables, the analysis that describes such relationship among the variables is called the multiple regression. This analysis is also adopted when one
dependent variable is performing the function of two or more independent variables. In multiple regressions, a linear composite of explanatory variables is formed in such a way that it has maximum correlation with an active criterion variable. The main objective of using this technique is to predict the variability of the dependent variable based on its co-variants with all the other independent variables. It is useful in predicting the level of the dependent phenomenon, if the levels of independent variables were given. The linear multiple regression problem is to estimate the coefficients \( \beta_1, \beta_2 \ldots \beta_j \) and \( \beta_0 \) such that the expression,

\[
Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_j X_k, \quad \text{Where } k = 1,2,3\ldots
\]

provided a good estimate of an individual \( Y \) score based on the \( X \) scores.

Where,

\[
\begin{align*}
Y & \quad = \text{level of preference to the milk product} \\
X_1 & \quad = \text{Educational Qualification} \\
X_2 & \quad = \text{Occupation} \\
X_3 & \quad = \text{Family Size} \\
X_4 & \quad = \text{Monthly Income} \\
X_5 & \quad = \text{Amount spent on milk per month} \\
X_6 & \quad = \text{Type of Milk}
\end{align*}
\]
Discriminant function analysis

The objective of Discriminant function analysis is to predict an object’s likelihood of belonging to a particular group based on several independent variables. The Discriminant function analysis reveals the specific variables that account for the largest proportion of inter-group differences. It is a simple scoring system that assigns a score to each individual or object. This score is a weighted average of the individual’s numeric value of the independent variables. The individual is assigned to the ‘most likely’ category on the basis of this score. The model is represented as:

$$Z_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_j X_{ik},$$

where $X_{ik}$ is the $i^{th}$ individual’s value of the $k^{th}$ independent variable, $\beta_j$ is the multiple discriminant coefficient of the $k^{th}$ variable. $Z_i$ is the $i^{th}$ individual’s multiple discriminant score.
Henry Garrett Ranking

This technique was used to ascertain the ranking position of the milk related factors that influence the consumers’ brand preference. In the Garrett’s scoring technique, the respondents were asked to rank the statements and these ranks were converted into percent position by using the following formula

\[
    \text{Percent position} = 100 \left( \frac{R_{ij} - 0.5}{N_j} \right)
\]

Where

- \( R_{ij} \) = Rank given to the \( i^{th} \) attribute by the \( j^{th} \) individual
- \( N_j \) = Number of attributes ranked by the \( j^{th} \) individual

By referring to the Garrett’s table, the percent position estimated was converted into scores. Thus for each factor, the scores of the various respondents were added and the mean score was estimated. The means thus obtained for each of the attributes were arranged in a descending order. The attribute with the highest mean score was considered as the most important one and the others followed in order.
Factor analysis

Factor analysis is a statistical technique used to study the inter-relationships among the variables in an effort to find a new set of factors, fewer in number than the original variables so that the factors are common among the original variables. In factor analysis, a small number of common factors are extracted so that these common factors are sufficient to study the relationship of original variables. Factor analysis helps the researcher to reduce the number of variables to be analyzed, thereby making the analysis easier. Using factor analysis, the researcher can reduce the large number of variables into a few dimensions called factors that summarize the available data. It aims at grouping the original input variables into factors which underlying the input variables.

Terminology in Factor Analysis

i) **Factor:** A factor is an underlying construct or dimension that represents a set of observed variables. In the credit card company for example, the demographic characteristics, socio economic status and background status represent a set of variables.

ii) **Factor Loading:** Factor loading help in interpreting and labeling the factors. It measures how closely the variables in the factor are
associated. It is also called factor-variable correlation. Factor loadings are correlation coefficients between the variables and the factors.

iii) **Eigen Values**: Eigen values measure the variance in all the variables corresponding to the factor. Eigen values are calculated by adding the squares of factor loading of all the variables in the factor. It aid in explaining the importance of the factor with respect to variables. Generally factors with eigen values more than 1.0 are considered stable. The factors that have low eigen values (<1.0) may not explain the variance in the variables related to that factor.

iv) **Communalities**: Communalities, denoted by h2, measure the percentage of variance in each variable explained by the factors extracted. It ranges from 0 to 1. A high communality value indicates that the maximum amount of the variance in the variable is explained by the factors extracted from the factor analysis.

v) **Total Variance explained**: The total variance explained is the percentage of total variance of the variables explained. This is calculated by adding all the communality values of each variable and dividing it by the number of variables.
vi) **Factor Variance explained:** The factor variance explained is the percentage of total variance of the variables explained by the factors. This is calculated by adding the squared factor loadings of all the variables and dividing it by the number of variables.

1.7 **PERIOD OF THE STUDY**

The period of the research study is four years, starting from August 2005 and ending in August 2009. The researcher took first six months to collect the review of literature and identify the research gap. Another six months were spent to draft the research design, to prepare data collection instrument and to conduct the pilot study. After finalizing the questionnaire, two years have been spent to collect the data from the target respondents. The researcher took six months to analyse and interpret the collected data and six months to prepare the thesis.

1.8 **SCOPE OF THE STUDY**

In the globalised era, the Indian dairy is in the stage of transition. The country has moved from milk scarcity to an era of abundance. Till now, the dairy business in India merely means milk production. To sustain and enhance dairy business, the dairy industries need to focus its efforts on marketing. A thorough understanding of consumer awareness and
preference is essential for marketing of fluid milk. A study of this kind will facilitate in understanding the consumption pattern and buying behavior of the fluid milk consumers. It will help in market segmentation and to evolve suitable strategies for effective implementation in defined market segments. The dairy industry could also take an active role by anticipating consumer needs and wants, shaping their desires and aspirations and solving many of the consumers' day-to-day problems in milk purchase by understanding consumer behavior. Such knowledge would help organized dairies to evolve a better marketing policy for enhancing goodwill and in building a sound reputation.

In today's market where no fluid milk brand can distinctively claim differentiation of features and it is important for dairy industry to assess its present and prospective customer base.

Hence, the present study entitled, "A Study on Consumption Pattern and Buying Behavior of Fluid Milk Consumers in Salem District" was undertaken.
1.9 OPERATIONAL DEFINITIONS

Brand

An identifying symbol, words, or mark that distinguishes a product or company from its competitors. Usually brands are registered (trademarked) with a regulatory authority and so cannot be used freely by other parties. For many products and companies, branding is an essential part of marketing.

Brand Preference

Measure of brand loyalty in which a consumer will choose a particular brand in presence of competing brands, but will accept substitutes if that brand is not available.

Consumer / Customer

Everyday purchaser of a good or service in retail. End user, and not necessarily a purchaser, in the distribution chain of a good or service and has the ability to choose between different products and suppliers.

Consumer buying behavior

Process by which individuals search for, select, purchase, use, and dispose of goods and services, in satisfaction of their needs and wants.
Consumer decision making

Process by which (1) consumers identify their needs, (2) collect information, (3) evaluate alternatives, and (4) make the purchase decision. These actions are determined by psychological and economical factors, and are influenced by environmental factors such as cultural, group, and social values.

Consumption expenses

Expenses incurred in consumption, as opposed to expenses incurred in production of goods and services. Expenditure during a particular period on goods and services used in satisfaction of needs and wants.

Homogenized milk

Most milk is homogenized to reduce the size of the remaining milk fat particles. This prevents the milk fat from separating and floating to the surface as cream. It also ensures that the milk fat will be evenly distributed through the milk. The hot milk from the pasteurizer is pressurized to a multiple-cylinder piston pump and is forced through very small passages in an adjustable valve. The shearing effect of being forced through the tiny openings breaks down the fat particles into the proper size.
Household

A social unit living together a domestic establishment containing the essentials of home life. A household is where people are held together by a particular kind of tie even if temporarily separated.

Household Income

Household income is the gross income earned by a group of two or more people who reside in the same dwelling, and who make common provision for food or other.

Household Size

The number of normally resident members of a household is its size. It will include temporary stay always but exclude temporary visitors and guests.

Milk

A white nutritious liquid secreted by mammals and used as food by human beings. A whitish liquid containing proteins, fats, lactose and various vitamins and minerals that is produced by the mammary glands of all mature female mammals after they have given birth and serves as nourishment for their young.
Meal Planner

The member of the family or household who makes the decision on type, variety and quantity of food to be prepared for the consumption by the members of the family.

Pasteurization

Pasteurization is used to kill harmful microorganisms by heating the milk for a short time and then cooling it for storage and transportation. Pasteurized milk is still perishable and must be stored cold by both suppliers and consumers.

Pattern

Consistent and recurring characteristic or trait that helps in the identification of a phenomenon or problem, and serves as an indicator or model for predicting its future behavior.

UHT Milk

A newer process, Ultra Pasteurization or Ultra-High Temperature treatment (UHT), heats the milk to a higher temperature for a shorter time. This extends its shelf life and allows the milk to be stored unrefrigerated because of the longer lasting sterilization effect.
1.10 LIMITATIONS OF THE STUDY

The study has the following limitations.

1. The Universe being large, the study was restricted with 600 consumers residing in selected sample areas of Salem district only.

2. The data were collected only from the consumers.

3. A few respondents were semi-literate and they are afraid to give accurate data, but whenever found bias, a cross check was made.

1.11 SCHEME OF CHAPTERS

The present empirical study has been divided into five chapters.

The first chapter deals with the introduction and design of the study. This includes Introduction, Importance of the study, Statement of the Problem, Objectives of the study, Methodology of the study, Period of the study, Scope of the study, Operational definitions, Limitations of the study and Scheme of Chapters.

The second chapter deals with the review of related concepts and the already existing literature on this research topic. This chapter also deals with the various empirical studies of various authors. It will be useful
to have a comprehensive understanding of the research topic under discussion.

The **third chapter** briefly presents the profile of the study area of this research inclusive of the profile of the dairy industry along with the theoretical inputs about the fluid milk consumers’ consumption pattern and buying behaviour.

The **fourth chapter** expresses the analysis and interpretation of the study. In this chapter an attempt was made to analyse the factors that influence the consumers’ preferences towards buying a particular brand of milk.

In the **fifth chapter** the key findings and conclusion are recapitulated. Based on these findings, a few suggestions have been proposed for the marketers to draw appropriate marketing mix strategies.