

**A STUDY TO UNDERSTAND THE MARKETING PATTERN OF MILK
IN BANGALORE CITY.**

By

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PROJECT REPORT SUBMITTED TO THE
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**SCHOOL OF AGRIBUSINESS MANAGEMENT
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DECLARATION

I hereby declare that the project report entitled “**A Study to understand the Marketing Pattern of Milk in Bangalore.**” submitted to the School of Agribusiness Management, College of Agriculture, Acharya N.G. Ranga Agriculture University in partial fulfillment of the requirements for the degree of Masters in Agribusiness Management (MABM) is the result of original work done by me.

Date:

(B.N.MAHENDRA)

CONTENTS

Chapter No.	Title	Page No.
I	Introduction	1-7
II	Methodology	8-15
III	Results and Discussions	16-36
IV	Conclusions and Implications	37-43
	References	44
	Appendix	45- 50

LIST OF TABLES

Sl. No.	TITLE	Page no
2.1	Attributes of liquid milk used for Conjoint Analysis	15
3.1	Income wise distribution of Sample households of Bangalore city (Income/month)	17
3.2	Decision makers of milk purchase in different income groups (No. of households)	18
3.3	General characteristics of different income groups of sample households in Bangalore city	19
3.4	Users and Non-users of milk and its products (No. of households)	20
3.5	Reasons for consuming milk and its products by sample households (No. of households)	21
3.6	Sources of purchase of liquid milk by sample households in Bangalore city (No. of households)	23
3.7	Quantities of milk used by sample households from various Branded and Unbranded sources (Ltrs/month)	24
3.8	Frequency of the purchase of milk by sample households (No. of households)	25
3.9	Frequency of purchase of milk by bulk buyers (No of respondents)	26
3.10	Sources of purchase of Milk by bulk buyers (No of respondents)	26

Sl. No.	TITLE	Page no
3.11	Quantity of milk purchased by Bulk buyers from Branded and Unbranded sources (Ltrs/month)	27
3.12	Monthly expenditure of Households on food and non-food (Percentages)	29
3.13	Income Group-wise usage of liquid milk by the sample Households (Percentages)	30
3.14	Monthly milk purchase and expenditure by Bulk buyers (Percentages)	31
3. 15	Usage pattern of liquid milk by bulk buyers	31
3.16	The distribution of milk through different channels	34
3.17	Relative importance of milk attributes and utility levels	36

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Place: Rajendranagar.

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TITLE OF THE PROJECT : A STUDY TO UNDERSTAND THE
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EXECUTIVE SUMMARY

Milk is a very important and essential commodity in the daily life of human diet since they provide much needed animal proteins to infants and vegetarian population in India. Even though the country stands first in the world with a production of 100 million tones of liquid milk (2006-07), the per capita availability of milk is about 245 grams per day.

Dairying was basically a backyard enterprise in India with just enough number of animals to cater to the needs of the family. Of late, dairying has become a commercial enterprise. A wide range of producers undertake this profession in both organized and unorganized sectors, which supply milk and milk products to the teeming millions in the city under several brand names. The much talked achievements of 'White Revolution' would not be possible without the dairy cooperatives, implementation of operation flood programmes and timely policies of the

government. The need of hour is to emphasize on the marketing and consumption aspects.

Consumers in any production system play a vital role around which the whole system revolves. With the rising income levels of the consumers and their changing tastes and preferences, the demand for milk is undergoing a change both in quantitative and qualitative terms. In the present investigation, an attempt was made to examine the consumption pattern of milk, and factors influencing the household's choice between loose milk and packed milk, to analyse different liquid milk distribution channels. Consumer preferences and attributes of liquid milk were also studied.

The project entitled "**A Study to Understand the Marketing Pattern of Milk in Bangalore City**" was carried out with the following objective.

Objective of the study are:

1. To analyze the consumption pattern of milk by brand and class of consumers.
2. To study the brand preference of different classes of consumers for different attributes of liquid milk.
3. To identify the liquid milk distribution channels.

The project work has been undertaken to know the customers perception regarding General profile of households, Purchasing behaviour, Consumption pattern, Distribution pattern and Consumer quality preferences.

Design of the study:

Required information for the study was collected from primary as well as secondary sources. A questionnaire was administered to the consumers to collect the primary data. Secondary data was collected from the information available on Internet, company brochures, books and journals. The collected data has been tabulated by using Ms Excel and is illustrated appropriately to make meaningful inferences. The data was subjected to appropriate statistical treatments like averages, percentages and the same has been presented in the form of tables. Conjoint analysis was performed to quantify and predict the consumers preferences. Conjoint analysis was carried out in order to study the important attributes where consumers look in liquid milk.

Findings:

The important findings of the study are summarized and suitable conclusions are drawn and presented below.

- The general characteristics of the 80 households revealed that majority (36.25) percent of households belonged to income groups IG₃.
- In about 51.25 per cent of the households, housewives made the buying decisions of milk.
- The average monthly family income of IG1, IG2, and IG3 were Rs. 2,600, Rs. 9,200 and Rs. 20,000, respectively, and there was positive relationship between income of the households and their family size.
- The Average age of the decision makers varied from 35 years to 58 years and the average family size from 2 to 5 members per family across the income groups. A majority of the households were nuclear families.

- Purchase behaviour of liquid milk by the households showed that all the households consumed liquid milk as it is required for preparing tea, coffee, curds etc.
- About 38.75 per cent of households from all income groups preferred dairy vendors or milk boys only because of the convenience of home delivery.
- Nandini was the most popular brand due to the co-operative nature of the firm, good quality and reputation as the oldest brand in the market. The other brands of milk used by households were Heritage, Arokya, Tirumala, and Dodla.
- All the liquid milk consumers, about 100 per cent of milk buyers purchased milk on daily basis.
- Most of the bulk consumers, except few sweet marts purchased and consumed milk on daily basis.
- For liquid milk, majority of bulk consumers in case of hostels preferred dealers only, as they offered home deliver.
- About 98.82 per cent of bulk consumers (sum of the percentages of branded milk) preferred packed milk over loose milk (1.18) per cent because of the regular supply and easy availability. In the packed milk category, 'Nandini' brand alone contributed about 53.12 per cent to the total milk purchased.
- High-income groups spent more on milk than lower income groups.
- Besides consuming liquid milk as such, most of the households utilized it for other purposes such as making tea / coffee 65 per cent, and direct consumption by 19 per cent of households.
- The quantity of milk purchased and the expenditure incurred was highest in the case of hostels because of high demand for milk for preparing tea, coffee, for direct consumption and for various dish items.
- The results of the conjoint analysis for liquid milk revealed that the households attached highest importance (52.63 per cent relative importance) to brand. Among the brands, Nandini was most preferred.

Suggestions:

- The companies may take into account the consumer preference while developing strategies.
- Milk companies may directly target the bulk buyers.
- Strengthening the brand can be adopted as a strategy to improve the market.
- The co-operatives should be free from the government intervention while fixing the price of the milk.
- Supply chain management of milk need to be strengthened to achieve marketing efficiency.
- The companies interested in promotion and aggressive distribution strategies should target housewives as they contribute in more than fifty percent of decision in household.
- The companies' preferences for branded milk is of highest importance and this can be strengthened further by adopting the strategy to improve market.
- To promote and improve village level institutions in milk can be through cooperative sector.
- To reduce the duration taken between procurement and sales.
- New technologies to be imported as they are effective.
- Also take up effective selling in other milk products like milk powder, ghee, ice creams, paneer, lassi etc.
- Providing quality milk and quality products at competitive rates.

CHAPTER I

INTRODUCTION

Milk is very important and essential commodity in the daily life of human diet. Milk is known as payas, dugdha and kshira in Sanskrit. Antediluvian Sages regarded milk as health tonic and strength giving nectar of life and compared it to Amritha. Ancient texts have described milk as the best among all the life-giving substances. Milk contains 86.13 per cent water, 5.02 per cent fat, 3.32 per cent protein, 4.82 per cent lactose and 0.70 per cent ash. Milk provides much needed animal proteins essential to the infants and vegetarian population in India. For centuries, milk from various animals like cow, buffalo and goat has been used in the diets of people throughout the world. (www.indiaparenting.com)

India is blessed with a huge bovine population of 196 million cattle and 80 million buffaloes accounting for about 51 per cent and 19 per cent of Asia's and World bovine population, respectively. According to (Kadirvel, 2003) the All India Summary Reports of 17th livestock census (July 2006), India possesses the largest livestock population in the World after Brazil. It accounts for 14 percent of the cattle population and 56 per cent of the buffalo population. Buffaloes contribute more to the milk pool with about 46.50 million tonnes (55 per cent) of milk followed by indigenous cows with 18.30 million tonnes (24 per cent), cross bred cows with 13.5 million tonnes (16 per cent) and goats with about 4.2 million tonnes (5 per cent).

1.1 Dairy Industry in India

Indian dairy industry can be divided into two types of enterprises, viz: Liquid Milk and Milk Products. In the procurement and marketing of liquid milk, there is strong presence of co-operative and traditional private channels though the organized sector private enterprises also

exist. Dairying as a profession revolves around milk and milk products. Milk production is undertaken by a wide range of producers both in organized and unorganized sectors. Livestock sector provides regular employment to 11 million in principal status and nine million in subsidiary status. Women constitute 69 per cent of the labour force in livestock sector as against 35 per cent in crop farming. Dairy co-operatives account for the major share of processed liquid milk in the country. Presently, about 1.13 lakh village level cooperative societies spread over 265 districts in the country form part of the National Milk Grid. The Grid links the milk producers throughout India with consumers in over 700 towns and cities smoothing the seasonal and regional variations in the availability of milk and ensuring a remunerative price to the producers and a reasonable price for quality milk and milk products to the consumers.

During 1964-65, Intensive Cattle Development Programme (ICDP) was introduced in the country in which a package of improved animal husbandry was given to cattle owners for promoting white revolution in the country. The milk production in India was 17 million tonnes in 1950-51. This could meet only 25 per cent of the domestic demand, and the remaining 75 per cent of the demand was met by importing the milk solids. The production stagnated for two decades till 1970, with annual growth rate of milk production of one per cent. Thanks to the vision and foresight of Dr. Varghese Kurien, in 1970, National Dairy Development Board launched "Operation Flood Programme" with an objective of ending milk famine in the country and turning farmers co-operatives into powerful catalyst for transforming India into a major milk producer in the World. Further, providing milk producers remunerative prices round the year, its production in India touched 74 million tonnes in 1997. By the year 2000, India tops to emerged as the largest milk producer surpassing USA with 86 million tonnes and it reached 100 million tonnes in 2006-07. The per capita availability of milk has also increased from 112 grams

in 1968-69 to 230 grams per day in 2005-06 and 245 grams per day in 2006-07. This is the result of India's "White Revolution" in milk

The first phase of "Operation Flood Programme" was between 1970 and 1981 and it laid the foundation for modern dairy industry in India. This period witnessed a self-sustaining growth of producers controlled dairy co-operatives. The second phase was in action during 1981 to 1985, which established 136 milk sheds and captured markets in 290 cities and provided 4.9 billion finance. The operation flood has completed third phase on 31st March, 1994 by capturing 500 cities with population target of 300 million customers and at present fourth phase is in operation. When the third phase was over, the following benefits had reached the small dairy farmers.

1. Sustained increase in production (4-5 per cent growth / annum) raising the per capita availability of milk to nearly 220 grams per day
2. Dependence on commercial imports of milk powder ended
3. Marketing mechanism improved and providing assured market outlet for milk producers and quality milk for consumers
4. The quality of milch animals improved.

At the end of Operation Flood- II, 72,744 dairy co-operative societies in 170 milk sheds of the country having total membership of 93.14 lakhs have been organized.

The Operation Flood programme launched another massive programme called "Technology Mission on Dairy Development (TMDD)" in June 1989. The objectives of TMDD were same as that of Operation Flood Programme's objectives.

Source: www.indiastat.com, www.amulindia.com

1.2 Dairy Industry in Karnataka

Karnataka has always remained in the forefront of all agricultural development initiatives in India and dairy development is no exception. Dairy farming in Karnataka, like in elsewhere in the country, is largely characterized by the prevalence of dairy enterprises that are mostly subsidiary occupations alongside the main agricultural activity of the farmer. Specialized dairy enterprises do exist but not only is their number abysmally low as compared to regular types, but also are restricted mostly to urban areas and their surroundings.

Karnataka stands second in milk production in the country. The milk production was around 33.00 Lakh litres during the year 2005-06. Though the State exports milk to neighbouring States of Goa, Kerala, Tamil Nadu and Andhra Pradesh, it does face shortage at times. Due to the drought conditions, milk production has been, however, decreasing in the last two to three years. Karnataka Milk Federation (KMF) has come a long way covering 13 milk unions and 15 dairy plants with a total milk processing capacity of 35.00 Lakh liters per day. Its milk and milk products like peda, jamoon, ghee, lassi, panner, Mysore pak, milk powder etc. under brand name "Nandini" have taken over 60 to 65 per cent of the milk market. The Federation also launched the five-litre jumbo-pack for the first time mainly targeting at bulk buyers such as hotels, restaurants and coffee shops. With 17 lakh litres of milk consumed within the State every day, the milk federation aims to produce 40 lakh litres of milk a day by 2008-09.

In addition to Co-operative societies, several private dairies as well as loose vendors meet the demand for milk in the State. Milk is consumed in the State in varied forms ranging from fluid milk to the products like peda, ghee, bengali sweets, which are liked most in urban conglomeration. Though, milk is produced in every village, these urban conglomeration are the major outlets for both branded and loose milk.

Bangalore is the fastest growing city in the State. The population is heterogeneous with diverse cultured, regional, religious and economic background. It was estimated that the demand for liquid milk was 13,00,000 litres per day in Bangalore city during 2006-07. The co-operatives were able to supply 50-60 per cent of packed milk.

Source: KMF Broacher, Mother Dairy Broacher.

Company Profile

Karnataka milk federation has set up various plants in Bangalore in the name of Mother Dairy at various places which procure milk from various chilling centers, pasteurized and homogenized places under the brand name of Nandini. They not only market milk sachets but also produce and market other milk products like Ghee, buttermilk etc.

Mother Dairy- A profile

Mother dairy was commissioned under operation flood-II with the - processing capacity of two lakh litres per day on 7-12-1984, with the total investment of rupees 6.97crores at Yelhanka in total area of 28.09acres. It is expanded to 4 lakh litres per day under Operation flood-III during 1993-94 with the additional cost of Rs. 3.64 crores. Total investment for this project is Rs. 10.61 crores.

In the beginning the plant was set up only to process milk but later it was expanded to produce milk powder and other milk products like butter, ghee, curd, buttermilk.

Objectives of Mother Dairy

The main objectives of mother dairy are,

1. To provide assured and remunerative market for the milk products

2. To provide quality milk for urban consumers
3. To build village level institutions in co-operative sector to manage the dairy activities
4. To ensure the provision of milk production inputs, processing facilities and dissemination of know how.
5. To facilitate rural development by providing opportunities for self-employment at village level, preventing migration to urban areas, introducing cash economy opportunities for steady income.

Market share

At present KMF is the market leader. It has 80% market share in and around Bangalore. Mother dairy is known for producing quality products at a reasonable price to satisfy the consumers.

Target Market

As milk and milk products are very much required for the people. Mother dairy is targeting all sections of the people. But most of the supply goes to bulk others like from.

- Hotels
- Institutions
- Hostels

Advertising

In the mother dairy they are painting, posters, bus painting, banner, display etc., Mother dairy is also advertising through television, radio, newspapers etc., it is advertising by different names in different states such as Vijay in Andhra Pradesh, Arvin in Tamilnadu and Milam in Kerala.

1.3 Objectives

1. To analyze the consumption pattern of milk by brand and class of consumers.
2. To study the brand preference of different classes of consumers for different attributes of liquid milk.
3. To identify the liquid milk distribution channels.

CHAPTER II

METHODOLOGY

The present study was undertaken to identify the important quality attributes, and General characteristics that would influence consumer preference for milk, and to analyse and predict the pattern of demand for liquid milk. This chapter covers the following aspects:

2.1 Description of study area

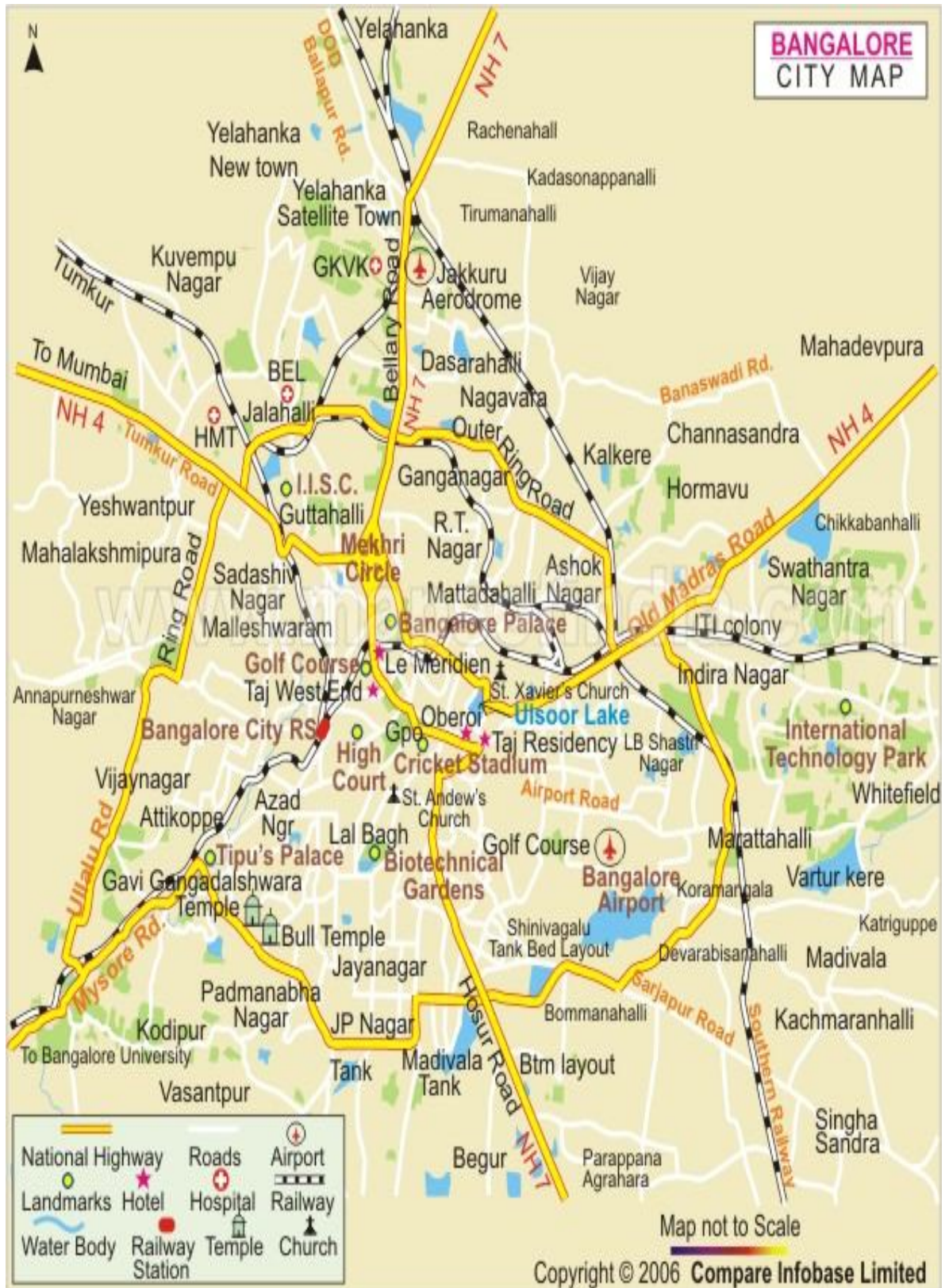
2.2 Sampling design and data collection

2.3 Analytical tools

2.1 Description of study area

Karnataka is one of the major milk producing states with a production of 33.00 Lakh litres of milk in 2005-06 (website: www.dairy.htm). Though milk is produced in every village, the consumption pockets are mainly the towns and cities. Mother Dairy Bangalore is one of the leaders in the procurement of milk in southern Karnataka. It has been supplying about 80 per cent of its total milk in Bangalore city itself. The average quantity of milk processed in Mother Dairy in the financial year 2007-08 is 5 lakh litres per day and shortly it will be expanded to 7-8 lakh litres per day. The estimated demand for liquid milk in Bangalore is about 13.00 lakh liters per day.

Bangalore is the fastest growing metropolitan city in Asia, and it is known as Greater Bangalore. The population is highly heterogeneous with diverse cultured, regional, religious and economic background. This Bangalore city conglomeration covers an area of 8,005 square kilometers with a population of 50 lakhs (2006-07survey). Because of the existence of various linguistic, religious and ethnic groups, it has been a very good marketing centre for launching new products. Since, the city provides an ideal setting to study the preference for milk was purposively selected for the present investigation.



2.2 Sampling design and Data collection

2.2.1 Selection of products

Discussions were held with the local consumers about the consumption of milk and milk products, and the marketers as well about the milk brands consumed most in Bangalore city to gather information on the brands to be selected for the study. Based on the discussions, important packed milk brands and the loose milk from vendors were chosen for the study. The liquid milk, curd, butter milk being generic products are consumed irrespective of the consumer's socio-economic / general background. Milk is converted to khova, and the bulk consumers mainly for the preparation of sweets consume khova.

2.2.2 Selection of sample

To study the consumption pattern of milk by the consumers as a whole, the consumers were divided into two types based on the quantity of milk consumed. They were grouped as households and bulk consumers. Bulk consumers included hostels, hotels and sweet marts, who consume generally huge quantity of milk besides the data on distribution channel participants, were collected.

A multi-stage sampling procedure was adopted for the selection of respondents. In the first stage, Greater Bangalore city was purposively selected for the reasons discussed earlier. In the second stage, for the selection of households, 8 localities were selected, they are Yelahanka, Yelahanka New town, Vidyaranyapuram, Kogilu, Hebbal, Judicial layout, Thindlu, Sahakarnagara. So that the households from localities would represent all the classes. The identification of localities was done in consultation with the experienced and knowledgeable persons of the localities.

In addition, bulk consumers were chosen for the study from the entire above bulk consumer groups from each locality, which meant eliciting information from a total of 30 bulk consumers. The respondents were interviewed with pre-structured and pre-tested schedules. Data were collected from the head / housewives in the case of households, as they are the ones, who normally set consumption pattern in the family, and from the owners / managers / cooks in the case of the bulk consumers. The sample was post-classified into three categories in the case of households based on the income criteria of different class of consumers in studying consumption pattern of milk from the households of Bangalore.

2.2.3 Data collection

To evaluate the objectives of the study required data were collected from primary sources.

Primary data

Information on the following aspects was collected from 80 households (10 households from each selected locality) and 30 bulk consumers as the case may be:

1. General information from individual respondents on their General characteristics.
2. Monthly family expenditure on food and non-food items in general, and milk in particular.
3. Information regarding the quantity of liquid milk consumed by both individual and bulk consumers.
4. The type of milk consumed and their source viz., branded, unbranded (Local) and loose milk.
5. Usage pattern of liquid milk by both types of consumers.
6. Milk attributes considered important by the households in their milk buying decisions.

Secondary data

The secondary data were collected from the following sources

Internet

Books

Company handbook

2.3 Analytical tools used

A detailed description of the analytical tools employed in the study is presented below.

2.3.1 Tabular analysis

Tabular analysis was used to compute averages and percentages for various General characteristics of respondents. It was also employed to study the consumption pattern of the milk.

2.3.2 Distribution Channel for liquid milk

Channel I: Producer—> Consumer (loose vendor)

Channel II: Milk vendor -> Consumer

Channel III: Company -> Retailer -> Consumer

Channel IV: Company -> Wholesaler -> Retailer -> Consumer.

Channel V: Company -> Retailer -> Delivery Boy -> Consumer.

Channel VI: Company -> Wholesaler -> Delivery Boy -> Consumer

2.3.3 Conjoint analysis

Conjoint analysis, also called multi-attribute compositional models or stated preference analysis, is a statistical technique that originated in mathematical psychology. Today it is used in many of the social sciences and applied sciences including marketing, product management, and operations research. It is a versatile marketing research technique that can provide valuable information for new product development

forecasting, market segmentation and pricing decisions, advertising and distribution, competitive analysis and responding.

In the present study, conjoint analysis was used to assess the consumer preference for the attributes of liquid milk. This technique focuses on the evaluation of alternative products, which are defined in terms of specific levels of attributes.

The following assumptions were made in conjoint analysis.

- a. A product could be described according to levels of a set of attributes.
- b. Consumer's overall judgment in respect of the product is based on the levels of each attribute.

Conjoint measurement seeks to quantify consumers overall judgement on the basis of the underlying attributes. It starts with the consumers overall judgments about a set of product alternatives (i.e., combination of attribute levels) and breaks the overall judgement down into the contribution of each attribute levels called part-worths. One of the important requirements of conjoint measurement is the identification of appropriate attributes and their feasible levels. The model is formulated as:

$$Y = \sum_{i=1}^n \sum_{j=1}^m V_{ij} X_{ij}$$

Where,

Y = consumer's overall evaluation of the product alternative

V_{ij} = part worth associated with j (1, 2, 3... m) of attributes i.

(i = 1, 2...n)

X_{ij} = dummy variable representing the preference of the jth level of ith attribute.

For the present study, attributes of the liquid milk considered important were identified based on discussion held with decision makers for consumption of milk. Specifically, the attributes influencing milk purchase were identified as colour, price, fat content and milk brand for this study.

The levels identified for each attribute are presented in table 2.1. Three price ranges were adopted for the analysis, namely, Rs. 10-14 per liter, Rs. 14-16 per liter and Rs. 16-22 per liter. For colour, two types- White and creamish yellow were considered. Fat content was taken as either low or high. For brand, important packed milk brands were selected in addition to loose milk. Four attributes with three levels in price, four levels in brand and two levels each in fat content and color meant 48 product alternatives in the analysis ($3*4*2*2=48$). For example, liquid milk of Nandini brand with high price, white colour and low fat was one such alternative. Computer software 'Statistical Package for Social Sciences (SPSS)' was employed to select a subset of 16 product alternatives, which represented the main effect alternatives. 80 consumers were administered with 16 plan cards and each respondent was asked to rank them from one to sixteen. Before ranking, the respondents were briefed regarding what each card meant and how they were expected to rank.

Table 2.1: Attributes of Liquid Milk used for Conjoint Analysis.

Attributes	Liquid Milk
Price (Rs/ltrs)	10 - 14
	14 - 16
	16 - 22
Colour	White
	Creamish Yellow
Fat Content	High
	Low
Brand	Nandini
	Heritage
	Arokya
	Loose vendors

CHAPTER III

RESULTS AND DISCUSSION

The results of the study are presented under the following headings.

- 3.1 General profile of the households
- 3.2 Purchase behaviour of the consumers of milk
- 3.3 Consumption pattern of milk
- 3.4 Distribution of liquid milk
- 3.5 Consumer quality preferences for liquid milk

3.1 General profile of the households:

General characteristics of the consumers are the important variables, which decide the consumption pattern of food products in the family. Generally, as the income, age and education of the consumers increase, the expenditure on consumption of food products also increases. Hence, to study the consumption pattern of milk, the consumers' socio economic characteristics were studied and the results are presented here.

3.1.1 Income-wise distribution of sample households

Income-wise distribution of sample households of Bangalore city is presented in Table 3.1. The sample households were post-classified into three groups based on their monthly family income. Samples with monthly family income of less than Rs.3000 were considered to belong to income group 1 (IG₁), those with income between Rs. 3001 and Rs.15000 were classified into income group two (IG₂), and finally those with income of more than Rs.15001 were categorized as income group three (IG₃). Accordingly, the proportion of sample households in IG₁, IG₂, and IG₃ was 28.75 per cent (23 in number), 35 per cent (28 in number), and 36.25 per cent (29 in number), respectively.

Table 3.1: Income Wise Distribution of Sample Households of Bangalore city

Households Income/ month	Income group	No. of samples	Percentage to total
Below Rs. 3,000	IG ₁	23	28.75
Rs. 3001 to 15,000	IG ₂	28	35.00
Above 15,000	IG ₃	29	36.25
Total		80	100

Note: IG = Income group

3.1.2 General characteristics of different income groups

Table 3.2 shows the family members making decisions regarding the purchase of milk across different income groups. It can be seen that housewives are the decision makers in as many as 51.25 per cent of the total of 80 households. In around 26.25 per cent of the households, decision was made by husband. Joint decisions by both husband and wife were made in about 11.25 per cent households. The results also revealed that in around 7.5 per cent households, mother-in-law made the decisions regarding the consumption of milk and milk products. These decisions were made by other family members in the rest of the cases.

The general characteristics of the sample households are presented in Table 3.3. It could be seen that the average monthly family income of IG₁, IG₂ and IG₃ was Rs. 2,600 Rs. 9,200 and Rs. 20,000 respectively. The average age of respondents of IG₂ was the highest (58 years) followed by IG₁ (35 years) and IG₃ (35 years). The average family size of the sample households was 3.0, 2.0, and 5.0 members per family in the three income groups, in that order.

The classification of sample households according to their family type revealed that in the IG₁, 21.74 per cent of families were joint and 78.26 per cent were nuclear families. In IG₂, 7.40 per cent families were joint and 92.60 per cent nuclear families, respectively, whereas it was 37.93 per cent joint and 62.07 per cent nuclear families in IG₃.

The percentages of sample households under food habits classification as vegetarians and Non-vegetarians in IG₁, IG₂, and IG₃ were 17.39 per cent and 82.61 per cent; 7.15 per cent and 92.85 per cent:

Table 3.2: Decision Makers of Milk Purchase in Different Income Groups

(No. of households)

Decision makers	Income groups			Overall
	IG ₁	IG ₂	IG ₃	
Housewife	12 (52.20)	14 (50.00)	15 (51.71)	41 (51.25)
Husband	6 (26.10)	6 (21.42)	9 (31.03)	21 (26.25)
Husband and wife Jointly	3 (13.00)	3 (10.72)	3 (10.34)	9 (11.25)
Mother-in-law	2 (8.70)	3 (10.72)	1 (3.45)	6 (7.5)
Others	0 (0.0)	2 (7.14)	1 (3.45)	3 (3.75)
Total	23 (100.00)	28 (100.00)	29 (100.00)	80 (100.00)

Note: Figures in parentheses indicate percentage to their respective income group totals

Decision makers of milk consumption

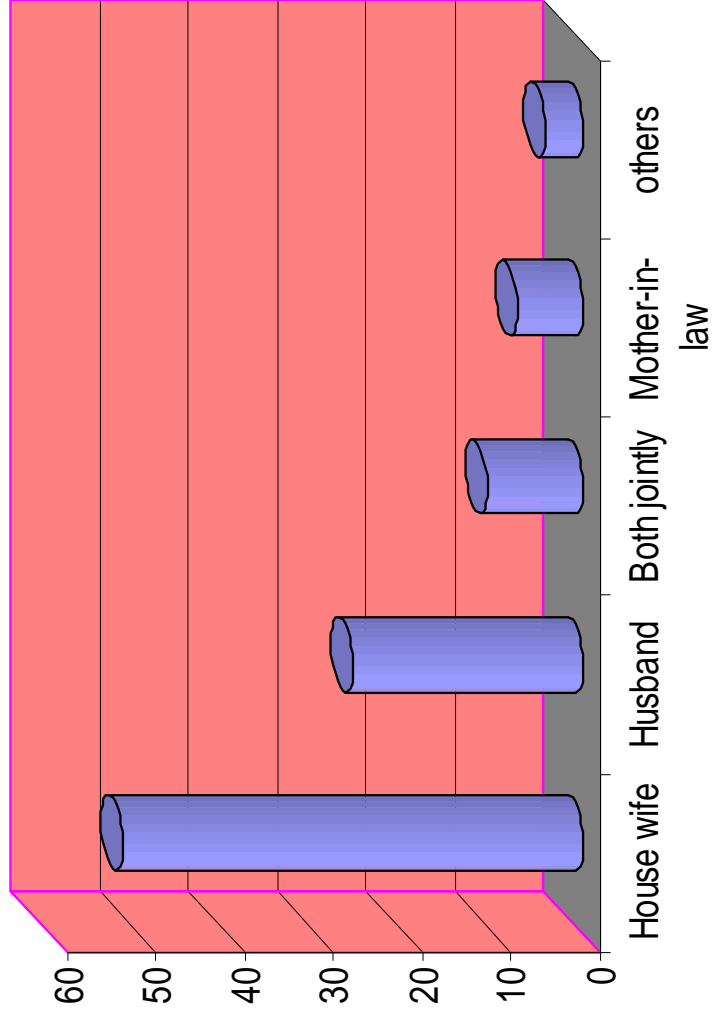


Table 3.3: General Characteristics of Different income Groups of Sample households in Bangalore city

Socio-Economic Characteristics	Unit	Income groups		
		IG ₁	IG ₂	IG ₃
Average family monthly income	Rs.	2600	9200	20,000
Average family size	Nos.	3.0	2.0	5.0
Average age of decision makers	Years.	35	58	35
Average No. of children / family	Nos.	1	2	1
Family type:				
Joint	Nos.	5 (21.74)	3 (7.40)	11 (37.93)
Nuclear	Nos.	18 (78.26)	25 (92.60)	18 (62.07)
Food habit:				
Vegetarian	Nos.	4 (17.39)	2 (7.15)	9 (31.03)
Non-vegetarian	Nos.	19 (82.61)	26 (92.85)	20 (68.97)
Occupation of the decision maker:				
House wife	Nos.	14 (60.87)	16 (57.14)	20 (69.00)
Service	Nos.	0 (0.00)	11 (39.30)	6 (20.69)
Employee	Nos.	2 (8.70)	1 (3.56)	3 (10.31)
Self-employed / Business	Nos.	7 (30.43)	0 (0.00)	0 (0.00)

31.03 per cent and 68.97 per cent, respectively. Under the occupation classification, housewives were 60.87 per cent, 57.14 per cent, and 69.00 per cent and in case of service were 8.70 per cent, 3.56 Per cent and 10.31 per cent in IG₁, IG₂ and IG₃, respectively. Service was found only in case of IG₂ (39.30) and IG₃ (20.69). Business/ others (including labours) were found only in case of IG₁ and their number accounted for 30.43 per cent of the total numbers in the respective groups.

3.2 Purchase behaviour of the consumers of Milk

3.2.1 Purchase behaviour of households

The Users and non-users of milk and milk products are presented in table 3.4. The table revealed that all the sample households consumed liquid milk. Curd was consumed by 80 per cent followed by butter 53.75 per cent of sample households. An attempt was made to elicit the reasons for consumption of milk and to analyse the media influence on the same. Table 3.5 presents the result. Liquid milk, curd, butter was used because of tradition habits by 78.75 per cent, 70.00 per cent, 28.75per cent households, respectively, while 87.5 per cent, 37.5 per cent, 23.75 per cent of respondents consumed liquid milk, curd, and butter for their nutritive value. Addition of beverage / taste to cooking was the main reason for the purchase of the liquid milk by 68.75 per cent, curd by 26.25 per cent and butter by 40.00 per cent respectively.

The selected households also consumed milk, curd, and butter on account of their liking by family members. The proportion of such families was 96.25 per cent, 77.5 per cent, and 45 per cent respectively. The households that used milk as cooking media accounted for 46.25 per cent and very small proportion of households consumed liquid milk (1.25) on doctor's advice.

Table 3.4: Users and Non-users of Milk and its products.

(No. of households = 80)

Products	Users	Non-users
Liquid milk	80 (100.00)	-
Curd	64 (80)	16 (20)
Butter	43 (53.75)	37 (46.25)

Note: Figures in parentheses indicate percentage

Table 3.5: Reasons for Consuming Milk and its products by Sample households

(No of samples households)

Reasons@	Products		
	Liquid milk (n=80)	Curd (n=80)	Butter (n=80)
Traditional usage	63 (78.75)	56 (70.00)	23 (28.75)
Nutritive value	70 (87.5)	30 (37.5)	19 (23.75)
Adds flavor / taste to cooking	55 (68.75)	21 (26.25)	32 (40.00)
Readily available	23 (28.75)	-	12 (15)
Liked by family Members	77 (96.25)	62 (77.5)	36 (45)
Required for preparation	72 (90.00)	-	-
Doctors advice	1 (1.25)	-	-
Media influence:	37 (46.25)	-	-
Friends and relatives	17 (21.25)	-	-

Note: Figures in the parentheses indicate percentage to the respective product consumers.

@ Multiple response and percentage do not tally to 100.

The sources of purchase of liquid milk and their usage by the sample households are presented in table 3.6 reveals, about 38.75 per cent of the total households considered in the analysis purchased liquid milk from dairy vendors / milk boy only, whereas 35 per cent of them purchased from traditional milk man (or) loose vendors only; 13.75 per cent from dairy parlours only and 12.50 per cent from both traditional

milk man as well as dairy parlours. In IG₁, Maximum number of households (73.91%) purchased from traditional milk man (or) loose vendors only. In IG₂ maximum number of households (39.29%) purchased milk from dairy vendors / milk boy only and similarly in IG₃ a maximum of (65.51%) households purchased milk from dairy vendors / milk boy only.

Table 3.7 presents the sources of branded and unbranded milk used by the households and the milk quantities purchased there from. The households from all the income groups put together purchased a total quantity of 470 litres of milk from unbranded sources / traditional milk man. Among the branded sources, Nandini was the most popular brand as the households bought 1164 litres of Nandini milk (43.38 per cent) followed by Heritage (15.13 per cent) and Arokya (9.81 per cent) with a quantity of 406 litres and 263 litres, respectively. The other brands preferred were Tirumala with 203 litres (7.57 per cent), and Dodla 177 (6.60 per cent) respectively.

Table 3.8 depicts the frequency of purchase of milk by households. As the table reveals all the milk buyers purchased liquid milk on daily basis. Out of that about 61.25 per cent buyers bought milk twice a day.

3.2.2 Purchase behaviour of bulk consumers

The bulk consumers in the study include hostels, hotels and sweet marts. Generally; they consume large quantity of milk. Bulk consumers Usually purchase liquid milk as and when the need arises. The purchase frequency of the sample Bulk consumers are presented in table 3.9.

It can be seen from the table that all the sample of hostels and hotels purchased liquid milk on daily basis. In the case of sweet marts about 70.00 per cent of the liquid milk buyers purchased liquid milk on daily basis and the Remaining 30.00 percent twice a week

Table 3.6: Sources of purchase of Liquid Milk by Sample Households in Bangalore city.

(No. of households)

Sources	Income levels			All / Total
	IG ₁	IG ₂	IG ₃	
Dairy parlors only	3 (13.04)	5 (17.86)	3 (10.35)	11 (13.75)
Dairy vendor/ milk Boy only	1 (4.34)	11 (39.28)	19 (65.51)	31 (38.75)
Traditional milk man / loose Vendors only	17 (73.91)	7 (25)	4 (13.79)	28 (35)
Both traditional milk man / loose Vendors and dairy Parlors	2 (8.71)	5 (17.86)	3 (10.35)	10 (12.50)
Total	23 (100.00)	28 (100.00)	29 (100.00)	80 (100.00)

Note: Figures in parentheses indicate percentage to their respective income groups

Table 3.7: Quantities of Milk Used by Sample Households from Various Branded and Unbranded sources

(litres/month)

Income levels				
Brand	IG₁ (n=23)	IG₂ (n=28)	IG₃ (n=29)	All (n=80)
Unbranded Milk				
Traditional milk man (Loose vendors)	123 (36.71)	197 (17.17)	150 (12.49)	470 (17.51)
Branded milk				
Nandini	90 (26.87)	507 (44.20)	567 (47.21)	1164 (43.38)
Heritage	43 (12.83)	173 (15.08)	190 (15.82)	406 (15.13)
Arokya	40 (11.95)	103 (8.98)	120 (9.99)	263 (9.81)
Tirumala	19 (5.67)	87 (7.59)	97 (8.08)	203 (7.57)
Dodla	20 (5.97)	80 (6.98)	77 (6.41)	177 (6.60)
Total	335 (100.00)	1147 (100.00)	1201 (100.00)	2683 (100.00)

Note: Figures in the parentheses indicate the percentages to their respective income groups

Quantities of milk used by households from various Branded and Unbranded sources

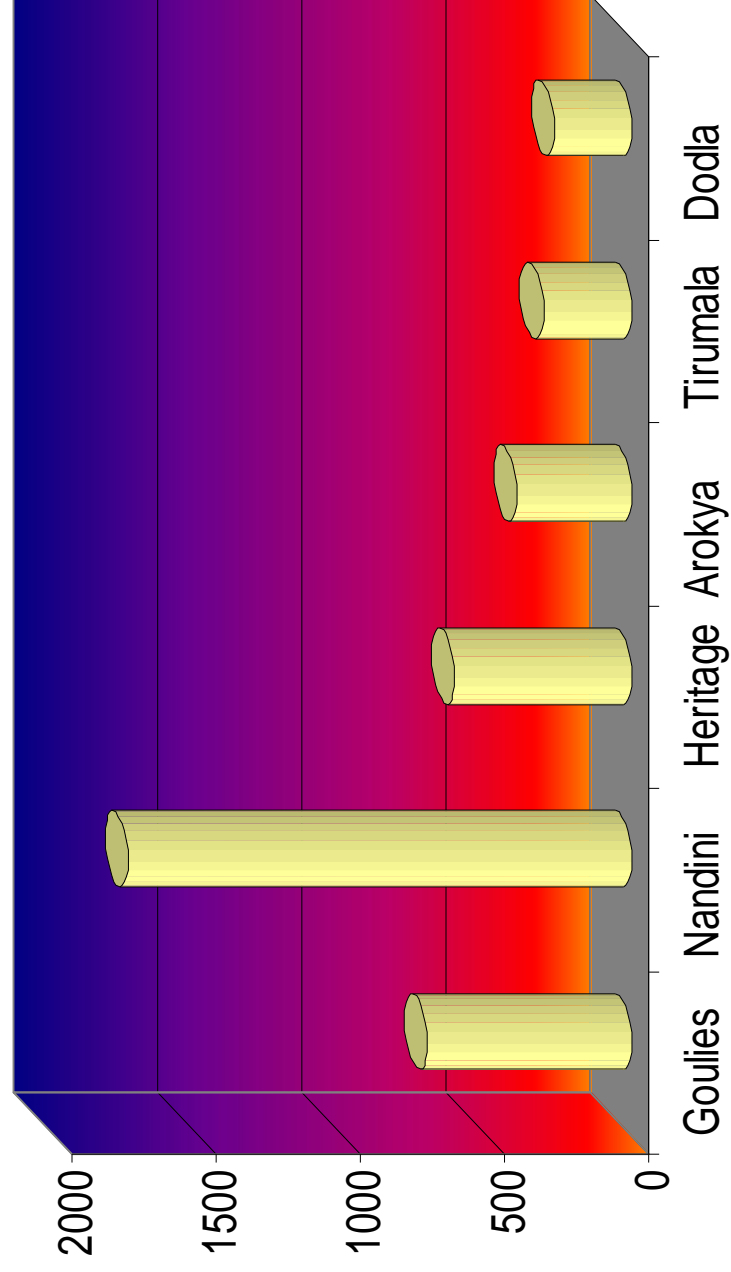


Table 3.8: Frequency of the purchase of Milk by Sample Households
(No. of households)

Purchase frequency			
Product	Daily	Once a day	Twice a day
Liquid Milk	80 (100.00)	31 (38.75)	49 (61.25)

The sources of purchase of milk by bulk consumers are presented in table 3.10. Among the different sources, distributors were the major source of liquid milk purchase. About 62.50 per cent, 33.33 per cent and 30.00 per cent of hostels, hotels and sweet marts, respectively, bought liquid milk from dealers only. About 37.50 per cent of hostels, and 40.00 per cent of sweet marts, and 16.67 per cent of hotels preferred dairy points / vendors only. About 20.00 per cent of sweet marts, 8.34 per cent of hotels resorted to loose vendors only for the purchase of milk. It was observed that about 41.66 per cent of hotels and 10.00 per cent of sweet marts purchased it from both distributor and loose vendors.

Table 3.11 presents the sources of branded and unbranded milk used by the bulk consumers and the quantities of milk purchased therefrom. A perusal of the table shows that Nandini was the most preferred brand, which was used to the extent of 23110 litres per month accounting for 53.12 per cent of the total liquid milk purchased by the bulk users followed by heritage, which supplied 7050 litres (16.20) per cent and arokyia which supplied 4530 litres (10.41) per cent next to Nandini, Heritage and Arokyia brands, Dodla and Tirumala sources were the most important ones as the bulk users bought as much as 4280 and 3930 litres of milk (9.84), (9.03) per cent. The other milk purchased by the bulk consumers was from the loose vendors about 605 litres (1.40) per cent; it was clear from the table that most of the bulk consumers preferred branded milk only.

Table 3.9: Frequency of purchase of milk by bulk buyers

(No. of respondents)

Frequency	Hostels	Hotels	Sweet marts
	Liquid milk	Liquid milk	Liquid milk
Daily	8(100.00)	12(100.00)	7(70.00)
Weekly	-	-	-
Twice a week	-	-	3(30.00)
Total	8(100.00)	12(100.00)	10(100.00)

Note: Figures in the parentheses indicate the percentages

Table 3.10: Sources of purchase of Milk by Bulk Buyers

(No. of respondents)

Source	Hostels	Hotels	Sweet marts
Distributor only	5(62.50)	4 (33.33)	3 (30.00)
Dairy points/dairy Vendors only	3 (37.50)	2 (16.67)	4 (40.00)
Traditional milk man (loose vendors)	-	1(8.34)	2 (20.00)
Both Distributor and traditional milk man	-	5(41.66)	1(10.00)
Total	8 (100.00)	12 (100.00)	10 (100.00)

Note: Figures in the parentheses indicate the percentages

**Table 3.11: Quantity of Milk purchased by Bulk Buyers from
Branded and unbranded sources**

(litres / month)

Brands	Bulk consumer groups			
	Sweet marts	Hostels	Hotels	total
Nandini	3300 (35.52)	8650 (54.24)	11160 (61.08)	23110 (53.12)
Heritage	1600 (17.23)	3165 (19.85)	2285 (12.50)	7050 (16.20)
Arokya	980 (10.55)	1565 (9.82)	1985 (10.86)	4530 (10.41)
Tirumala	1450 (15.60)	1000 (6.27)	1480 (8.10)	3930 (9.03)
Dodla	1560 (16.79)	1565 (9.82)	1155 (6.32)	4280 (9.84)
Loose vendors	400 (4.31)	-	205 (1.14)	605 (1.40)
Total	9290 (100.00)	15945 (100.00)	18270 (100.00)	43505 (100.00)

Note: Figures in parentheses indicate the percentages

3.3 Consumption pattern of Milk

3.3.1 Consumption pattern of households

The monthly average expenditure of the households is presented in Table 3.12. It could be seen from the table that the household's monthly expenditure increased with increase in monthly income. The average monthly expenditure on milk and milk products was highest in case of IG₃ (Rs.364) followed by IG₂ (Rs. 276), IG₁ (Rs.140). Similar trend was noticed with respect to the total monthly expenditure, which amounted to Rs. 1190 for IG₁, Rs. 3342 for IG₂, and Rs. 5556 for IG₃.

The usage pattern of liquid milk for different purposes by the sample households is presented in Table 3.13. The table shows that about 74 per cent of the total quantity of milk consumed by IG₁ was used in tea / coffee preparation. The corresponding numbers for IG₂ and IG₃ were 60.00 per cent and 62.00 per cent, respectively. The quantity of milk used for drinking varied from 17.00 per cent of the total quantity used in respect of IG₁ to 21.00 and 20 per cent in respect of IG₂ and IG₃.

For preparation of curd, the largest proportion of 19.00 per cent of liquid milk was used by IG₂ followed by IG₃ (18.00) percent, and IG₁ (9.00) percent.

Table 3.12: Monthly expenditure of households on food and non-food (Rs. / month)

Income group	Food		Non-food	Total
	Milk	Others		
IG1	140	788	262	1190
IG2	276	1566	1500	3342
IG3	364	2158	3034	5556

Note: Non-food expenditure includes money spent on clothing, education, utilities etc. Figures in parentheses indicate the percentages

3.3.2 Consumption pattern of bulk consumers

The bulk consumers in the study included hostels, hotels and sweet marts. Generally, they consume high quantity of milk and milk product. The purchasing pattern of liquid milk by different bulk consumers is presented in table 3.14. It could be seen from the table that average milk purchased by the Hotels was as high as 1408 litres per month amounting to an expenditure of Rs. 19712 per month, while hostels purchased 814 litres of milk per month worth Rs. 11400 and sweet marts purchased 880 litres of milk amounting to Rs. 9680 per month.

In general, liquid milk is used for the preparation of different milk products with only a minimum quantity used for direct consumption. Table 3.15 shows the usage pattern of liquid milk for different purposes by the bulk consumers. About 46.00 per cent of liquid milk was used for the preparation of curd, 30.00 per cent for making tea / coffee and only 24.00 per cent was used as fluid milk by the hostels. In hotels, it was used for different purposes like preparation of tea / coffee 45.00 per cent, about 30.00 per cent was used in fluid form, while about 22.00 per cent for preparation of curd, and for the preparation of sweets 3.00 per cent. Only in case of sweet marts, 100 per cent of liquid milk was used for the preparation of sweets.

Table 3.13: Income Group-Wise usage of Liquid Milk by the Sample Households

(In Percentages)

Purpose	Income levels			Average
	IG ₁	IG ₂	IG ₃	
Drinking as milk	17 (4)	21 (6)	20 (6)	19 (16)
Tea / coffee preparation	74 (17)	60 (17)	62 (18)	65 (52)
Preparation of Curd	9 (2)	19 (5)	18 (5)	16 (12)
Total	100 (23)	100 (28)	100 (29)	100 (80)

Table 3.14: Monthly Milk Purchase and Expenditure by Bulk Buyers

Particulars	Hostels	Hotels	Sweet marts
Average quantity of Milk purchased (ltr/Month)	814	1408	880
Average price (Rs)	14	14	11
Average expenditure On milk (Rs. /month)	11,400	19,712	9680

Table 3.15: Usage Pattern of Liquid Milk by Bulk Buyers

Purpose	Percentage of milk used by		
	Hostels	Hotels	Sweet marts
Fluid milk	24	30	-
Tea / Coffee	30	45	-
Curd	46	22	-
Sweets	-	3	100
Total	100	100	100

3.4 Distribution channel for Liquid Milk

An attempt was made in the study to identify the different distribution channels of liquid milk in the city of Bangalore are:-

Channel I: - Primary milk producer -> Consumer

Channel II: - Milk vendor -> Consumer

Channel III: - Company -> Retailer -> Consumer

Channel IV: - Company -> Wholesaler -> Retailer -> Consumer

Channel V: - Company -> Retailer -> Delivery Boy -> Consumer

Channel VI: - Company -> Wholesaler -> Delivery Boy -> Consumer

In Channel I the producer themselves sell the milk to consumer. And sales mainly are in unpacked and unbranded form where the farmers themselves will sell the milk. These producers are dairy farmers it is direct sales from producer to consumer.

In this Channel II Milk vendors are the traders in milk owning shop in the residential locality buying milk from the primary producers and sell directly to the consumers.

In this Channel III Milk business organization under co-operative and private sector with developed brand delivers the milk to the retailer in Bangalore city. The retailer sells the brands of the companies to the consumers.

In this Channel IV companies will delivery the milk with its brands to a wholesaler in large quantities; where wholesaler will delivery the milk to the retailer depending upon the requirement of the retailer and finally from retailer it moves to the ultimate consumer.

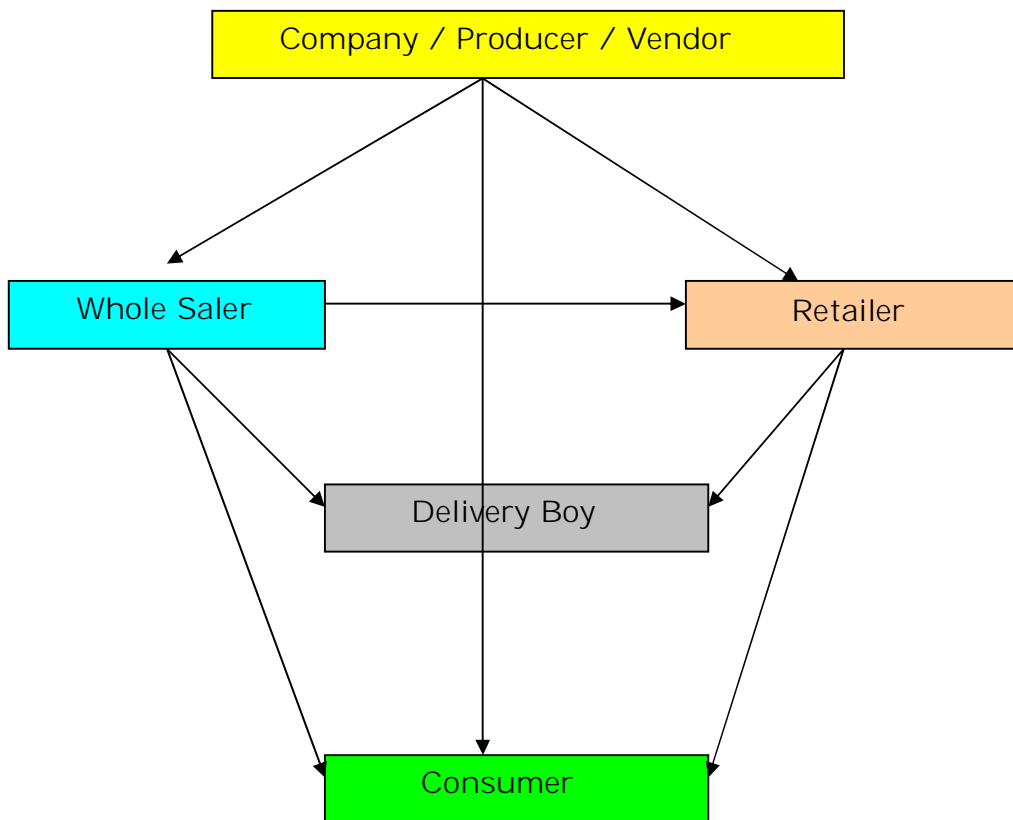


Fig 3: Diagrammatical Representation of the Distribution Channel

In this channel V the retailer after purchasing milk from the company sells in smaller quantities to the Delivery Boy. Where in households are customers to the Delivery boy for which the payment will be payed on monthly basis by the households.

In this Channel VI the wholesaler after purchasing milk from the company sells in required quantities to the Delivery boy. Where in households are the customers to the Delivery boy for which the payment will be payed on monthly basis by the households.

The Distribution of milk by the company, vendor, producer takes different routes to reach the consumer, where six different channels are identified in the flow of milk from the producer / company / vendor to the consumer out of this channels the flow of milk in unbranded form is

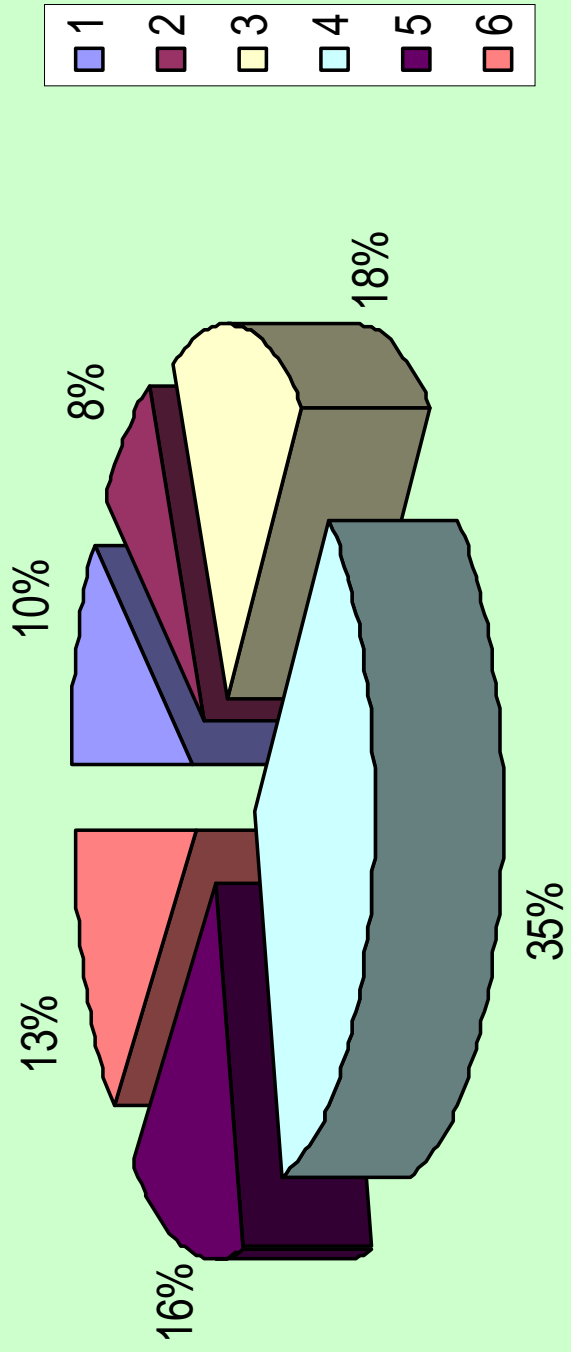
mainly in the Channel I (10.00 per cent) and Channel II (7.51 per cent) together constituting (17.51 per cent) from both. Among the distribution of milk in the branded form to the respondent household is done through channel III (18.35 per cent), Channel IV (35.33 per cent), Channel V (15.68 per cent) and Channel VI (13.13 per cent) respectively. According from unbranded form it is about 17.51 per cent remaining 82.49 per cent of the branded products moves in four Channels.

The share of individual distribution channel out of the total household purchase of milk in the month is taken into consideration.

Table 3.16: The Distribution of Milk through Different Channels is indicated in table.

SL NO	Channels of Distribution	Share of the channel out of purchase by house holds
1	Channel I	10.00
2	Channel II	7.51
3	Channel III	18.35
4	Channel IV	35.33
5	Channel V	15.68
6	Channel VI	13.13
Total		100

Share of the channel out of purchase by house holds



3.5 Consumer Preferences for attributes of Liquid Milk

The conjoint analysis was performed to quantify and predict the consumers overall quality evaluation on the basis of their rankings given for the bundle of attributes by which they derive satisfaction. Conjoint analysis was carried out in order to study the important characteristics or attributes consumers look for in liquid milk. For this, four most important quality attributes were identified along with their levels. The consumers were asked to rank the attributes according to their preference. The results of conjoint analysis are presented in Table.

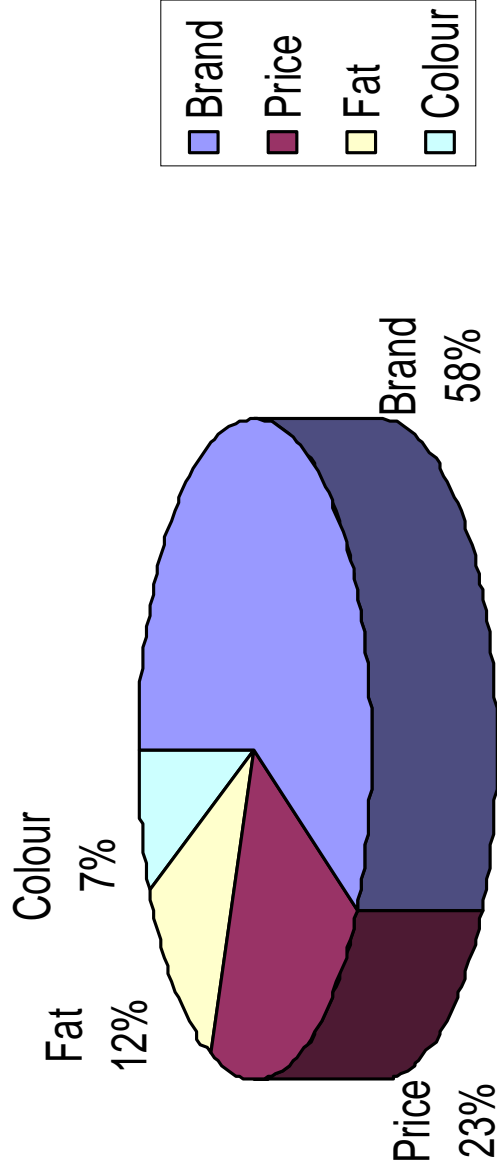
A glance over Table 3.17 reveals that among the four selected attributes, brand was the most important one influencing the consumer's choice for purchase of liquid milk. The relative importance attached to brand by the respondents was 52.63 per cent, followed by price (24.21), fat (10.53) and colour of the milk (12.63), respectively. The relative utility scores revealed that among the milk brands, 'Nandini' was the most preferred brand with a utility score of 3.00 followed by loose and other brands having negative utility scores. Among the price range of Rs. 16 to 22, (utility score of -1.50) was the most preferred price range followed by the range of Rs. 14 to 16 (utility score of 1.3750) and Rs. 10 to 14 (utility score of -1.250). High fat (utility score of 0.625) was naturally preferred to low fat liquid milk (utility score of -0.625) by the consumers. With respect to colour, white colour was preferred to creamish yellow coloured milk. For the entire group, the value of 'R²' was 0.653 indicating fairly good fit of the model to the data.

Table 3.17: Relative importance of milk attributes and utility levels

Attributes	Attribute levels	Utility Scores	Relative importance (%)
Brand	Nandini	3.00	52.63
	Heritage	-1.75	
	Arokya	-2.00	
	Loose vendors	-3.25	
Price	Rs. 10 to 14	-1.25	24.21
	Rs. 14 to 16	1.37	
	Rs. 16 to 22	-1.50	
Fat Content	High	0.625	10.53
	Low	-0.625	
Colour	White	0.750	12.63
	Creamish Yellow	-0.750	

Note: For the entire group, the value of 'R²' was 0.653

Fig: Relative Importance of Milk Attributes



CHAPTER IV

CONCLUSIONS AND IMPLICATIONS

Milk is a very important and essential commodity in the daily life of human diet since they provide much needed animal proteins to infants and vegetarian population in India. Even though the country stands first in the world with a production of 100 million tones of liquid milk (2006-07), the per capita availability of milk is about 245 grams per day.

Dairying was basically a backyard enterprise in India with just enough number of animals to cater to the needs of the family. Of late, dairying has become a commercial enterprise. A wide range of producers undertake this profession in both organized and unorganized sectors, which supply milk and milk products to the teeming millions in the city under several brand names. The much talked achievements of 'White Revolution' would not be possible without the dairy cooperatives, implementation of operation flood programmes and timely policies of the government. The need of hour is to emphasize on the marketing and consumption aspects.

Consumers in any production system play a vital role around which the whole system revolves. With the rising income levels of the consumers and their changing tastes and preferences, the demand for milk is undergoing a change both in quantitative and qualitative terms. In the present investigation, an attempt was made to examine the consumption pattern of milk, and factors influencing the household's choice between loose milk and packed milk, to analyse different liquid milk distribution channels. Consumer preferences and attributes of liquid milk were also studied.

The specific objectives of the study were:

1. To analyse the consumption pattern of milk by brand and class of consumers.
2. To study the brand preference of different class of consumers for different attributes of liquid milk.
3. To identify the liquid milk distribution channels

The study was carried out in respect of Bangalore North city. The urban conglomeration is one of the test marketing centers for launching new products by well known corporate and business houses.

A multi stage sampling procedure was followed to collect data. A sample size of 80 households was chosen randomly from 8 selected localities at the rate of 10 households from each selected locality. In addition, 30 bulk consumers (Which include hostel, hotel and sweet marts). Data were collected from the housewives in the case of households, as they are the ones who normally set consumption patterns in the family and from the owners / managers / cooks in the case of the bulk consumers. Data were collected with the help of pre-structured and pre-tested schedules through personal interview.

The households were grouped into three income groups based on income criteria. To study the consumption pattern, simple averages and percentages were calculated. Identification of milk distribution channel. Conjoint analysis was used to understand the household's preferences for liquid milk.

Findings of the study

The important findings of the study are summarized and suitable conclusions are drawn and presented below.

1. The general characteristics of the 80 households revealed that Majority (36.25) percent of households belonged to income groups IG₃, while IG₂ comprised of (35.00) percent households and followed by IG₁ (28.75) per cent.
2. In about 51.25 per cent of the households, housewives made the buying decisions of milk. In about 26.25 per cent of households, husband makes the buying decision of milk. Joint decisions by both husband and wife were made in about 11.25 per cent of households and only about 7.5 per cent and 3.75 per cent the decision was made by mother-in-law and others.
3. The average monthly family income of IG₁, IG₂, and IG₃ were Rs. 2,600, Rs. 9,200 and Rs. 20,000, respectively, and there was positive relationship between income of the households and their family size.
4. The Average age of the decision makers varied from 35 years to 58 years and the average family size from 2 to 5 members per family across the income groups. A majority of the households were nuclear families. Classification of households according to their food habit revealed that about 82.61 per cent of IG₁, 92.85 per cent of IG₂ and 68.97 per cent of IG₃ were non-vegetarians and the remaining were vegetarians.
5. Purchase behaviour of liquid milk by the households showed that all the households consumed liquid milk as it is required for preparing tea, coffee, curds etc.
6. About 38.75 per cent of households from all income groups preferred dairy vendors or milk boys only because of the convenience of home

delivery. About 35 per cent depended on goulies (vendors) since they preferred loose milk, and goulies could supply liquid milk at pre-settled prices. The highest percent of consumers from all income groups put together purchased liquid milk from dairy parlours only due to the nearness and availability of milk at any time.

7. The households purchased as much as 2213 litres of milk (sum of the quantities of all brands) from branded sources and only about 470 litres of loose milk supplied by goulies and home production. Among all the packed milk brands, Nandini was the most popular brand due to the co-operative nature of the firm, good quality and reputation as the oldest brand in the market. The other brands of milk used by households were Heritage, Arokya, Tirumala, and Dodla.
8. All the liquid milk consumers, about 100 per cent of milk buyers purchased milk on daily basis at the same moment about 61.25 per cent of milk buyers purchased milk twice a day for consumption.
9. Most of the bulk consumers, except few sweet marts purchased and consumed milk on daily basis.
10. For liquid milk, majority of bulk consumers in case of hostels preferred dealers only, as they offered home delivery. 40 per cent of the hostels, sweet marts and 16 per cent hotels relied on dairy points. Around forty per cent of hotels relied on both dealers and goulies.
11. About 98.82 per cent of bulk consumers (sum of the percentages of branded milk) preferred packed milk over loose milk (1.18) per cent because of the regular supply and easy availability. In the packed milk category, 'Nandini' brand alone contributed about 53.12 per cent to the total milk purchased. The other brands of milk used by bulk consumers were Heritage, Arokya, Tirumala and Dodla.

12. Consumption pattern across income groups revealed that the expenditure on food item increased with income. High-income groups spent more on milk than lower income groups.
13. Besides consuming liquid milk as such, most of the households utilized it for other purposes such as making tea / coffee 65 per cent, and direct consumption by 19 per cent of households.
14. The quantity of milk purchased and the expenditure incurred was highest in the case of hostels because of high demand for milk for preparing tea, coffee, for direct consumption. and for various dish items. Hostels consumed huge quantity (46.00 per cent) of liquid milk for curds followed by use for tea / coffee (30.00 per cent) and fluid consumption (24.00 per cent).
15. The results of the distribution channel for liquid milk revealed that by the company, vendor, producer takes different routes to reach the consumer, where six different channels are identified in the flow of milk from the producer / company / vendor to the consumer out of this channels the flow of milk in unbranded form is mainly in the Channel I (10.00 per cent) and Channel II (7.51 per cent) together constituting (17.51 per cent) from both. Among the distribution of milk in the branded form to the respondent household is done through channel III (18.35 per cent), Channel IV (35.33 per cent), Channel V (15.68 per cent) and Channel VI (13.13 per cent) respectively. According from unbranded form it is about 17.51 per cent remaining 82.49 per cent of the branded products moves in four Channels, Therefore Channel IV is most preferred for the distribution of liquid milk.
16. The results of the conjoint analysis for liquid milk revealed that the households attached highest importance (52.63 per cent relative importance) to brand followed by price (24.21 per cent relative importance) and fat content (12.63 per cent relative importance).

Colour received least importance (10.53 per cent relative importance). Among the brands, Nandini followed by loose vendors were most preferred.

Implications

1. The companies may take into account the consumer preference while developing strategies.
2. Milk companies may directly target the bulk buyers.
3. Strengthening the brand can be adopted as a strategy to improve the market.
4. The co-operatives should be free from the government intervention while fixing the price of the milk.
5. Supply chain management of milk need to be strengthened to achieve marketing efficiency.
6. The companies interested in promotion and aggressive distribution strategies should target housewife's as they contribute in more than fifty percent of decision in household.
7. The companies preferences for branded milk is of highest importance and this can be strengthened further by adopting the strategy to improve market.
8. To promote and improve village level institutions in milk can be through cooperative sector .
9. To reduce the duration taken between procurement and sales .
10. New technologies to be imported as they are effective.

11. Also take up effective selling in other milk products like milk powder, ghee, ice creams, paneer, lassi etc..

12. Providing quality milk and quality products at competitive rates.

CHAPTER V

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**School of Agri-Business Management
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“A Study to Understand the Marketing pattern of Milk in Bangalore”

Questionnaire

I. General Information:

- 1) Name of the respondent:
- 2) Age:
- 3) City: Bangalore
- 4) Location:
- 5) Education qualification: PS/HS/SSLC/PUC/UG/PG
- 6) Occupation =Main / Subsidiary
- 7) Food habit: Veg/Non-Veg
- 8) Mother Tongue:
- 9) Type of family: Joint/Nuclear
- 10) Family size:

Family members	Number
Male	
Female	
Children	
Old members / (Age > 60 years)	
Total	

- 11) Total Monthly income of family Rs.
- 12) Total Monthly Expenditure on food Rs:-
- 13) Total Monthly Expenditure on non-food Rs:-

Note:

Non-food items: Housing, medical expenditure, utilities (gas, water, electricity), education, cloths, transportation, recreation etc.

II. Monthly consumption pattern of liquid milk

product	Branded / Unbranded	Frequency	Quantity (Liters)	Source	Price / Unit(Rs)
1) Liquid milk	a)	a) Daily		a) Home Delivery	
	b)	b) Twice a day		b) Retail Shops	
		c) Thrice a day		c) Public /Private Booth	
2) Others	a)	d) Once in two days			
	b)	e) Others Specify			

III. BRAND PREFERENCE OF CONSUMERS FOR LIQUID MILK

- 1) Which brand you prefer (Co-operative / Private brand)?
- 2) Why do you prefer that brand?
- 3) Since how many years you are using this brand.

IV. Reasons for brand preference:-

- 1) Availability of brand near by area.
- 2) Better delivery service
- 3) Replacement in case of spoilage
- 4) Convenient and accessible retailer
- 5) Availability of brand through out the day
- 6) Reasons for shifting the brand.
- 7) Available with different fat content percentage. (Blue, red, green)
- 8) Hygienic
- 9) Available in different packed quantity.
- 10) Price

V. Attributes of milk as preferred by individual:

1) Freshness	
2) Colour	
3) Fat and SNF content	
4) Thickness	
5) Price	
6) Shelf life	
7) Water content	
8) Packaging	
9) Replacement in case of spoilage of milk	
10) Quality assurance	
11) kind of milk (cow or buffalo)	

Note: For infants milk with higher fat content is purchased.

VI. Reasons for consuming the liquid milk

Reasons	Liquid milk
1) Traditional usage	
2) Nutritive value (For good health)	
3) Beverage	
4) Readily available	
5) Liked by family members	
6) Required for preparation of sweets	

7) Doctors advise	
8) Influenced by Media i) TV ii) Radio iii) Magazines iv) others	
9) Other reasons i) Friends and relatives ii) Influence of retailers iii)	

VII. Milk Consumed as:

- 1) Direct milk consumption by adding sugar.
- 2) Milk consumption by adding flavored beverages.
- 3) Used for preparation of coffee or tea.
- 4) Used for preparation of curds.
- 5) Used for preparation of butter milk.

VIII. Who makes the buying decision? _____ Age ____ yrs

Occupation _____

IX. SCHEDULE FOR COLLECTION OF DATA ON DISTRIBUTION CHANNEL PARTICIPANTS:-

Channel-I:

Primary milk producer → Consumer

Channel-II:

Milk vendor → Consumer

Channel-III:

Company → Retailer → Consumer

Channel-IV:

Company → Wholesaler → Retailer → Consumer

Channel-V:

Company → Retailer → Delivery boy → Consumer.

Channel-VI:

Company → Wholesaler → Delivery boy → Consumer

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**“A Study to Understand the Marketing pattern of Milk in Bangalore
(Schedule for bulk consumers)**

I. GENERAL CHARACTERS

- a. Name: b. Age:
 c. City: Bangalore d. Location:
 e. Educational qualification: PS/HS/SSLC/PUC/UG/PG
 f. Occupation:
 g. Monthly income: Rs.

II. Monthly consumption pattern of milk

product	Brand	Quantity	Price/Unit(Rs.)	Total amount(Rs.)	Purchased from
a. Liquid milk	a. b.				

III. Who makes buying decision?..... Age.....
 Occupation.....

IV. Milk purchase frequency

Frequency	Liquid milk
Daily	
Twice a day	
Thrice a day	

