CHAPTER I

INTRODUCTION AND RESEARCH DESIGN
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CHAPTER I

INTRODUCTION AND RESEARCH DESIGN

"A person buying ordinary products in a supermarket is in touch with his deepest emotions."


1.1. Introduction

India is one of the fast growing retail destinations in the world with more number of retail outlets. Its retail development is taking place not just in major cities, but also in smaller towns. India's growing population and urbanisation provides a huge potential for retail. Its growing economic prosperity and transformation in consumption pattern demand improved retail atmosphere and this resulted into emergence of modern retail formats.

Modern retail has seen a significant growth in the past few years. In recent years, Indian corporate giants make more investments in food and grocery retailing, particularly in supermarkets, in order to capture the large potential of Indian retail which is so far unorganised. The Indian retail sector has gathered a new momentum with the establishment of different international brand outlets, hyper or super markets, shopping malls and departmental stores.

Now-a-days more and more new retail ventures are being started all over India, but the success of a retail venture depends on good patronage from the buyers. Moreover, the attitude of people towards shopping is changing from just normal regular purchase to
recreational purchase. The shopping action becomes a part of family outing activity among the Indian modern consumers. Most of the families especially in urban cities go for shopping in malls, where they can fulfill both their shopping and recreation needs.

In India consumer spending is increasing day by day. The middle class people, who comprise 42 per cent of total Indian population, are mainly responsible for the growing consumer spending. The annual disposable income of the middle class is between `5 to 20 lakhs. In their total spending, major share goes for food and grocery, which occupies around 74 per cent of total retail market in India. The organized grocery retail constitutes 20 per cent of organized industry. It is growing at the rate of 11 per cent per annum.¹

Consumption is clearly growing faster in China and India than in developed countries.² Retail consumption in India remains growing both in rural and urban areas even though galloping food price prevails. Food price witnesses a decade-high of 20 percent jump signals that, rising inflation cannot create much impact on consumption pattern.

The fast growing Indian economy has given a major thrust to changing consumer behaviour as reflected by the increase in retail investment for the setting up of hypermarkets. Companies like

¹ Ankitha Mangala, *India Retail Research - April 2010*, Northbridge Capital, p 50
Reliance Retail have set aside `24,000 crore for establishing hyper marts by the year 2010-11 in National Capital Region. Spencer retail also announced a capital expenditure of `3000 crore for expanding its retail outlet and setting up hyper marts in the next three years.3

Since there is a huge demand for food and grocery items in India, the organized retail in this segment is gaining momentum. Altogether Indian corporate giants are vying with one another in the formation of super and hyper markets. But in order to survive in today's competitive market retail concerns must create and maintain a loyal customer base.

Consumer loyalty is the strength of the relationship between an individual's relative attitude and repeat patronage.4 The most important element for establishing loyalty is the ability of stores to fulfill promises to its consumer base. The continued fulfillment of promises usually results in a long-term relationship between a retail concern and the buyers. Customer loyalty becomes more meaningful only when it translates into purchase behavior, as attitudinal loyalty of a customer without behavioral loyalty may only provide limited or no tangible returns.5

3 Samreen, “Corporate majors optimistic on retail boom, line up investments exceeding Rs. 1 lakh crore”, ASSOCHAM ECO Pulse, March 2008, p 3
Indian retailers face an uphill task in wooing customers as they continue to face problems in attracting them from traditional grocery stores. Reflecting the slowdown trend, customers’ adoption of modern trade formats slowed in 2008 compared to 2007. Still the organised retail format in food and grocery could not get more market share. Still Indian organised retail could gain only a little market shares in the total Indian retail. The following table shows the total retail and share of organised retail in various retail categories.

**Table 1.1**

Organised retail and total retail markets in India

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Retail Categories</th>
<th>Organised market (₹ crore)</th>
<th>Total markets (₹ crore)</th>
<th>Organised market share (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Footwear</td>
<td>11,814</td>
<td>17,859</td>
<td>66.2</td>
</tr>
<tr>
<td>2</td>
<td>Time-wear</td>
<td>3,116</td>
<td>4,984</td>
<td>62.5</td>
</tr>
<tr>
<td>3</td>
<td>Eyewear</td>
<td>623</td>
<td>1,570</td>
<td>39.7</td>
</tr>
<tr>
<td>4</td>
<td>Apparel &amp; Clothing</td>
<td>44,166</td>
<td>1,41,547</td>
<td>31.2</td>
</tr>
<tr>
<td>5</td>
<td>Personal care &amp; fitness</td>
<td>1,103</td>
<td>5,670</td>
<td>19.5</td>
</tr>
<tr>
<td>6</td>
<td>Consumer Electronics (CDIT)</td>
<td>11,684</td>
<td>62,836</td>
<td>18.6</td>
</tr>
<tr>
<td>7</td>
<td>Leisure</td>
<td>3,635</td>
<td>21,000</td>
<td>17.3</td>
</tr>
<tr>
<td>8</td>
<td>Mobile &amp; Telecom</td>
<td>5,452</td>
<td>33,220</td>
<td>16.4</td>
</tr>
<tr>
<td>9</td>
<td>Home &amp; Interiors</td>
<td>7,530</td>
<td>46,665</td>
<td>16.1</td>
</tr>
<tr>
<td>10</td>
<td>Accessories</td>
<td>882</td>
<td>7,450</td>
<td>11.8</td>
</tr>
<tr>
<td>11</td>
<td>Catering &amp; food services</td>
<td>9,737</td>
<td>90,825</td>
<td>10.7</td>
</tr>
<tr>
<td>12</td>
<td>Entertainment &amp; Gaming</td>
<td>4,414</td>
<td>55,440</td>
<td>8.0</td>
</tr>
<tr>
<td>13</td>
<td>Pharmacy</td>
<td>2,986</td>
<td>61,215</td>
<td>4.9</td>
</tr>
<tr>
<td>14</td>
<td>Jewellery</td>
<td>3,700</td>
<td>80,469</td>
<td>4.6</td>
</tr>
<tr>
<td>15</td>
<td><strong>Food &amp; Grocery</strong></td>
<td><strong>15,838</strong></td>
<td><strong>13,18,165</strong></td>
<td><strong>1.2</strong></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td><strong>1,26,680</strong></td>
<td><strong>19,48,916</strong></td>
<td><strong>6.5</strong></td>
</tr>
</tbody>
</table>


The above table signifies that the total market share of organized retail in India is 6.5 percent and in the case of food and grocery the share of organised retail is only 1.2 percent. Dominance of traditional unorganised retail is attributed as the major reason for this poor market share. All over India the market share of organised retail is much lesser. The following table provides the region wise market share of organised retail.

**Table 1.2**  
**Region wise market share of Indian Retail**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>All-India</th>
<th>North India</th>
<th>East India</th>
<th>West India</th>
<th>South India</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>19,48,916</td>
<td>5,68,556</td>
<td>4,20,405</td>
<td>4,77,472</td>
<td>4.82,483</td>
</tr>
<tr>
<td>2</td>
<td>1,26,680</td>
<td>41,582</td>
<td>11,363</td>
<td>35,320</td>
<td>38,414</td>
</tr>
<tr>
<td>3</td>
<td>6.5</td>
<td>7.3</td>
<td>2.7</td>
<td>7.4</td>
<td>8.0</td>
</tr>
<tr>
<td>4</td>
<td>100</td>
<td>29.2</td>
<td>21.6</td>
<td>24.5</td>
<td>24.8</td>
</tr>
<tr>
<td>5</td>
<td>100</td>
<td>32.8</td>
<td>9</td>
<td>27.9</td>
<td>30.3</td>
</tr>
</tbody>
</table>


However, Indian retailing accounts for 39 per cent of India’s GDP, which is quite a significant proportion if compared with other developed and developing economies. This indirectly shows that retailing in India is an untapped source for the corporate giants. When we look other countries the proportion of retailing in the organized
sector is only 6 percent. The following diagrammatic representation provides a clear picture of this fact.

Exhibit 1.1

Retail contribution to GDP and retail penetration in India

![Retail contribution to GDP and retail penetration in India](image)

Sources: Economist Intelligence Unit (EIU), Euromonitor, A.T. Kearney analysis

Now, the markets have started looking optimistic with many retail giants by getting into the expansion mode. In the last two years, few supermarket chains like Subhiksha and Vishal were closed. Despite this, new innovative retailers are entering into the field more in numbers. With the markets getting tougher, this sector is poised for innovation like never before. In western countries retail sector has grown well, but in India the retail is still growing and continues to grow.

1.2. Statement of problem

The globalization of the Indian Economy has brought forward a change in the Indian consumerism. Now consumers are well aware of
the value of money strength and their economic purchasing power
than their previous generations. The concept of product quality and
service delivery which were not dominant earlier among consumers
are now very much demanded.

Adam Smith quoted in his book *The Wealth of the Nation* as,
"Consumption is the sole end and purpose of all production; and the
interest of the producer ought to be attended to only so far as it may
be necessary for promoting that of the consumer." Smith Adam,
*An Inquiry into the Nature and Causes of the Wealth of
Nations*, Harriman House Ltd., 2007, p. 426. His views are also
applicable for the trading concerns also. When a retail supermarket
gives priority for the satisfaction of its buyers, then it can maintain
good buyer patronage.

The most fundamental requirements of any business concern
are to acquaint with the buyers, who visit into the shop and change in
their habits over a period of time. In Tirunelveli district the
supermarket concept is yet to gain popularity. But in a short span of
five years more than six supermarkets were closed. An entrepreneur
who wishes to commence supermarket should take note of it and
should identify the reasons for such failures. There may be various
reasons for the closure of those supermarkets. Generally, the reasons
for the failure of a business concern like the supermarket can broadly
be divided into two. One is the reason emanating from the
supermarket itself i.e. due to its own functionality and the other is
from the buyers. The first reason can be explored and rectified but

Smith Adam, *An Inquiry into the Nature and Causes of the Wealth of
the later i.e. understanding the buyer is a tough job for a supermarket.

The success of a retail concern requires a deep understanding of shopper demographics. A retailer must understand the relationship between age, income, occupation and gender of shoppers which change their buying habits. An in-depth and complete analysis of the changing behaviour of shoppers is to be made. The basics of where, when and how often people visit different outlet types, and provides insights into key aspects of shopping behaviour are to be analysed.

Supermarkets have to focus more on satisfying the customers. This is possible only through the study of consumer behaviour and understanding the demographics of an area. In order to entice the consumers, supermarkets should differentiate themselves from other retail formats. They have to offer quality products and an overall unique experience.

Research evidence suggests that even satisfied customers defect.\(^8\) The subconscious part of the brain of some shoppers drives them to make a buy. Therefore new strategies are to be adopted for analysing shoppers to know their emotions and impulses to buy a commodity and to gauge their latent motivations manifest in their actions.

As far as a supermarket is concerned, periodical understanding of the perception of buyers towards the supermarket will fulfill all those requirements mentioned above. Clear periodical understanding of the buyers’ perception is required as the psychology of buyers is ever changing. By understanding the perception, corrective action can be taken. Moreover, this will facilitate a supermarket to retain their customer base. Thus this research work is aimed at knowing the perceptual level of buyers in supermarket.

1.3. **Objectives of the study**

The objectives of the study have been divided into two they are general objectives and specific objectives. The specific objectives have been framed in order to achieve the general objective.

1.3.1. **General Objective**

The general objective of the study is to know the perception of buyers on the various aspects of supermarkets in Tirunelveli District.

1.3.2. **Specific Objectives**

In order to achieve the general objective the study is conducted with the following specific objectives.

1. To find the demographic profile of the buyers in supermarket in Tirunelveli district.
2. To identify the relationship between the buying habits of buyers in supermarket and their demographic profile.
3. To know the latent reasons behind the buying in supermarket.
4. To study the general buying behaviour of buyers on supermarket.

5. To explore the attitude of buyers towards the private brands of supermarkets.

6. To know the perception and expectation of buyers on the various service quality dimensions supermarkets.

7. To identify the gap between perceived service quality and the expected service quality of supermarkets among the buyers.

8. To study the level of satisfaction of buyers towards supermarkets.

1.4. Hypotheses of the Study

Various relevant null hypotheses have been framed in order to test the objectives of the study. The following are the null hypotheses framed.

**H₀₁** – There is no association between the average monthly purchases and the demographic variables such as gender, nature of living place, age, occupational status, marital status, educational status, income group, family type and family size.

**H₀₂** – There is no association between the type of buyer in a supermarket and the demographic variables such as gender, nature of living place, age, occupational status, marital status, educational status, income group, family type, family size, type of residence of respondents and
average monthly expenses on provisions.

**Ho 3** - There is no association between the periodicity of visit in supermarket and the profile variables such as gender, nature of living place, age, occupational status, marital status, educational status, income group, family type, family size, type of residence of respondents and average monthly expenses on provisions.

**Ho 4** - There is no association between the frequency of buying in a supermarket and the profile variables such as gender, nature of living place, age, occupational status, marital status, educational status, income group, family type, family size, type of residence of respondents and average monthly expenses on provisions.

**Ho 5** - Preference of supermarket is not influenced by the demographic variables such as nature of living place, occupational status, educational status, income group, family type, family size and average monthly expenses on provisions.

**Ho 6** - Period of patronage towards supermarket is not influenced by the demographic variables such as gender, nature of living place, age, occupational status, marital status, educational status, income group, family type, family size, type of residence, average monthly expenses on provisions and preferred supermarket.
$H_07$ – There is no association between the preferred day of shopping in supermarket and the demographic variables such as gender, nature of living place, age, occupational status, educational status, income group, family type, family size, average monthly expenses on provisions and type of buyer in a supermarket.

$H_08$ – There is no association between the preferred time for shopping in a supermarket and the demographic variables such as gender, nature of living place, age, occupational status, marital status, educational status, income group, family type, family size and average monthly expenses on provisions.

$H_09$ – There is no significant relationship between the place of residence of buyers and the reasons for buying in supermarket.

$H_010$ – There is no significant difference among the respondents of different areas on the Important Latent Reasons for buying commodities in supermarket.

$H_011$ – Profile variables such as gender, age, occupational cluster, marital status, educational status, income group, family type, family size, average monthly purchases on provisions and type of buyer do not significantly differ on the Important Latent Reasons.

$H_012$ – There is no association between the duration of shopping
in a supermarket and the demographic variables such as gender, nature of living place, age, occupational status, marital status, educational status, income group, family size, average monthly expenses on provisions and type of buyer in a supermarket.

\(H_0\,13\) – There is no association between the preferred location for a supermarket and the profile variables such as gender, nature of living place, age, occupational cluster, marital status, educational status, income group, family size, average monthly expenses on provisions and type of buyers in a supermarket.

\(H_0\,14\) – There is no significant association between the trend in quantity of buying in supermarkets and the profile variables such as gender, nature of living place, age, occupational cluster, marital status, educational status, income group, family size and type of buyer.

\(H_0\,15\) – There is no association between the level of satisfaction of buyers on supermarkets comparing to small retail grocery shops/provision stores and the profile variables such as gender, nature of living place, age, occupational cluster, marital status, educational status, income group, family size, average monthly expenses on provisions and type of buyer.

\(H_0\,16\) – There is no association between the tendency of making price comparison between supermarkets and small retail
grocery shops/provision stores and the profile variables such as gender, nature of living place, age, occupational cluster, marital status, educational status, income group, family size, average monthly expenses on provisions and type of buyer.

**Ho 17** - There is no significant association between the tendency of buyers to compare the quality of commodities in supermarkets and small retail grocery shops/provision stores and the profile variables such as gender, nature of living place, age, occupational cluster, marital status, educational status, income group, family size, average monthly expenses on provisions and type of buyer.

**Ho 18** - There is no significant difference among the buyers of various areas on the buying preference of various commodities.

**Ho 19** - There is no significant difference between urban and non-urban buyers on the preference of private brands.

**Ho 20** - There is no significant relationship between the nature of living place and the various attributes towards supermarkets.

**Ho 21** - There is no significant difference between the perception and expectation of buyers on various factors under the tangibility dimension of supermarket.

**Ho 22** - There is no significant difference between the perception
and expectation of buyers on various factors under the reliability dimension of supermarket.

\( H_0 \) 23 – There is no significant difference between the perception and expectation of buyers on various factors under the dimension of staff behaviour in supermarket.

\( H_0 \) 24 – There is no significant difference between the perception and expectation of buyers on various factors under the dimension of problem solving tendency of supermarket.

\( H_0 \) 25 – There is no significant difference between the perception and expectation of buyers on various factors under the policy dimension of supermarkets.

\( H_0 \) 26 – There is no significant difference between the perception and expectation of buyers on the various service dimensions of supermarket.

\( H_0 \) 27 – There is no significant relationship between the nature of living place and the level of satisfaction of buyers on various aspects of supermarket.

\( H_0 \) 28 – There is no significant relationship between the level of satisfaction on various factors of supermarket and the demographic variables such as gender, age, occupation, marital status, educational status, income and family size.

1.5. Operational definition of concepts

In this research work, the researcher has used some of the terms which require explanation for better understanding. However, meaning has not been given for standard terms. Some of the terms are
used with a specific meaning and operational definitions for such terms are given below.

**Consumer** – Consumer is a person who consumes a commodity. The word consumer is a broader term, which also includes the buyer. In this research work, in order to have wider coverage of respondents, all the persons in a family who consume commodities bought from a supermarket have been taken for the analysis. Thus the term consumer has been used in this research to have a wider coverage. But for easy understanding the term buyer is used in all the places instead of the word consumer.

**Deshopping** – Act of returning commodities bought for consumption or usage by the buyers.

**Hedonic need** – The need to achieve pleasure from a product; most likely associated with emotions or fantasies derived from consuming a product

**Kiosk** – Refers to a small stand-alone structure used as a point of purchase. This can be a computer screen used to sell product or get information to customers. Kiosks are often found in malls and other high-traffic locations.

**Markdowns** – Percentage reduction in the initial retail price

**Occupational cluster** – Division of respondents on the basis of occupation. On the basis of occupation, the respondents are divided into five clusters such as labour class, business class, salaried class, homemakers and others. Labour class includes farmers and daily
labour; business class includes business people and self-employed; salaried class includes private sector workers, government sector workers, pensioners; professional peoples like lawyers, doctors and the like and so on; homemakers includes women respondents neither employed nor doing business, and others include students and other types of people not covered in the above categories.

**Private Label** – Products which are generally manufactured or provided by one company under another company’s brand

**Point-of-Sale** – Refers to the area of a store where customers can pay for their purchases. The term is normally used to describe systems that record financial transactions. This could be an electric cash register or an integrated computer system which records the data that comprises a business transaction for the sale of goods or services.

**Point-of-Purchase Display** – Marketing materials or advertising placed next to the merchandise. These items are generally located at the checkout area or other location where the purchase decision is made.

**Push-cart Vendor** – A person selling goods through a wheeled vehicle propelled by himself.

**Quantity Discount** – A reduction in price based on the amount purchased and it may be offered in addition to any trade discount.

**Retail Chain** – A firm consisting of multiple retail units under common ownership that usually has some centralization of decision making in defining and implementing its strategy.
Retail Format – A type of retail mix used by a number or retailers.

Stock Keeping Unit – A number assigned to a product by a retail store to identify the price, product options and manufacturer.

Retail Shrinkage – Retail shrinkage is a reduction or loss in inventory due to shoplifting, employee theft, paperwork errors, suppliers’ fraud and the like.

Retail Verticals – Retail concerns that engage in trade, based on specific and specialized needs for similar customers. For example, home appliances retail concern, apparel shops and the like.

Shoplifting – The act of stealing merchandise from a store by customers or people posing as customers.

1.6. Area of the study

This study was conducted in urban and semi-urban locations of Tirunelveli district. The presence of at least one supermarket is considered as the eligibility criteria for selecting the study area. Tirunelveli District consists of one Municipal Corporation, seven Municipalities and thirty-six Town Panchayats. Field observation showed that, in the study area supermarkets are functioning in the places such as Tirunelveli Municipal Corporation, four Municipalities and few Town Panchayats. Therefore seven locations were selected for the study. Under the urban category, Tirunelveli Municipal Corporation was selected and among the semi-urban areas Kadayanallur, Tenkasi, Sankarankoil, Ambasamudram, Vallioor and Thisayanvilai were selected as the area of study.
1.7. Period of the study

This study was conducted in between the period 2008 and 2011. Thus data prevailed during this period are highly focussed. In the case of secondary data some of the data were not available during the focus period. Therefore the researcher has used certain data earlier to the study period. However, the primary data were collected in between April and December 2010. The entire study was made based on the facts available in between the study period of 2008 and 2011.

1.8. Research methodology applied

This research work was conducted on the basis of scientific methods through the following sequence of activities.

1.8.1. Type of research

This research is empirical research in nature. This type is useful when a problem cannot be studied in laboratory settings. In this type of research, empirical evidences can be analysed quantitatively as well as qualitatively. Empirical data have been collected through a well constructed questionnaire in order to achieve the objectives. Explicit hypotheses were also framed and tested depending on the research problem.

1.8.2. Data used

In this study both the secondary as well as primary data have been used. The secondary data have been used for gathering the theoretical and conceptual background on the study area. Published
and unpublished sources of information have been used for the secondary data. The primary data have been used in order to fulfill the objectives of research work.

1.8.3. Collection of data

The secondary data were collected from various books, journals, magazines, theses, newspapers, study papers and websites. The primary data have been collected through a well-constructed questionnaire. The questionnaire was finalised after making a pretest through the pilot study.

1.8.4. Pilot study

Prior to the commencement of this research work, a pilot study was made to have the better knowledge on the statement of problem of the study. In order to make the pilot study, initially a questionnaire was constructed with fifty-five questions categorised into five different heads and the questionnaire was pretested. The pretest of questionnaire was made with forty respondents of sample study area. After the pretest, the questionnaire was curtailed with fifty-one questions.

1.8.5. Sampling Technique adopted

In this research work, the combination of purposive sampling and snowball sampling technique has been used. In purposive sampling, we sample with a purpose in mind. We usually would have one or more specific predefined groups we are seeking. Purposive sampling can be very useful for situations, where we need to reach a
targeted sample quickly and where sampling for proportionality is not
the primary concern. With a purposive sample, we are likely to get the
opinions of target population and we can also identify subgroups in
the population.

Customers of most of the supermarkets in Tirunelveli district
irrespective of their place of living (either urban or rural) were involved
in this study. The method of purposive sampling was employed
whereby the respondents had to fulfill the criteria of having visited the
stores before; even if they had not made any purchases. As
distributing the questionnaires within the stores’ premises was not
allowed by many of the supermarkets, the questionnaires were
personally hand-delivered in workplaces, homes, educational
institutions and shopping complexes. Data was collected over a period
of nine months in between the months of April and December 2010.

In snowball sampling, few respondents who fulfill the criteria for
the study were identified. Then they were asked to recommend others
who they may know who also meet the criteria. Although this method
would hardly lead to representative samples, there are times when it
may be the best method available. Snowball sampling is especially
useful when we are trying to reach populations that are inaccessible
or hard to find.

1.8.6. Sample size

Statistical populations of this research are people who are the
buyers in a supermarket in Tirunelveli District. In this study seven
places were selected as target area. Since the volume of statistical population in the selected places was distinct and unlimited, the sample size is determined with the help of Cochran formula given below:

\[
    n = \frac{Nt^2 pq}{Nd^2 + t^2 pq}
\]

Where \( n \) = sample size

\( N \) = Volume of the statistical population

\( t \) = number of table (t) for 95 percent confidence interval \( t=1.96 \)

\( p \) = supposed ratio of satisfied person \( p=0.5 \)

\( q \) = supposed ratio of unsatisfied person \( q=0.5 \)

\( d \) = distance of assurance \( d=5/100 \)

The targeted sample population has been calculated on the basis of above formula and the sample size has been decided in the following manner.

Table 1.3
Population of sample Geographical Area

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the Place</th>
<th>Type of the Place</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tirunelveli</td>
<td>Corporation</td>
<td>2,03,173</td>
<td>2,08,125</td>
<td>4,11,298</td>
</tr>
<tr>
<td>2</td>
<td>Kadayanallur</td>
<td>Municipality</td>
<td>37,196</td>
<td>38,408</td>
<td>75,604</td>
</tr>
<tr>
<td>3</td>
<td>Tenkasi</td>
<td>Municipality</td>
<td>30,977</td>
<td>31,851</td>
<td>62,828</td>
</tr>
<tr>
<td>4</td>
<td>Sankarankoil</td>
<td>Municipality</td>
<td>26,879</td>
<td>26,734</td>
<td>53,613</td>
</tr>
<tr>
<td>5</td>
<td>Ambasamudram</td>
<td>Municipality</td>
<td>15,862</td>
<td>16,819</td>
<td>32,681</td>
</tr>
<tr>
<td>6</td>
<td>Vallioor</td>
<td>Town Panchayat</td>
<td>11,786</td>
<td>12,234</td>
<td>24,020</td>
</tr>
<tr>
<td>7</td>
<td>Thisayanvilai</td>
<td>Town Panchayat</td>
<td>9,440</td>
<td>10,117</td>
<td>19,557</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>3,35,313</strong></td>
<td><strong>3,44,288</strong></td>
<td><strong>6,79,601</strong></td>
</tr>
</tbody>
</table>

Source: Census of India, 2001
The Cochran formula has provided that for the targeted population of 6,79,601 people the statistical population is 384 persons. Since targeted geographical area is large, for higher accuracy and better coverage, after calculating the sample size (i.e. 384), the statistical population was multiplied by 2. Therefore, 768 persons were targeted as sample respondents. In order to ensure equal distribution among all the geographical area the targeted 768 respondents were further subdivided on the basis of their respective population. The following table provides the number of targeted sample population in the study area.

### Table 1.4

**Area-wise distribution of targeted sample respondents**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the Place</th>
<th>Targeted sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Male</td>
</tr>
<tr>
<td>1</td>
<td>Tirunelveli Municipal Corporation</td>
<td>230</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(49.5)</td>
</tr>
<tr>
<td>2</td>
<td>Kadayanallur</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(49)</td>
</tr>
<tr>
<td>3</td>
<td>Tenkasi</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(49)</td>
</tr>
<tr>
<td>4</td>
<td>Sankarankoil</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(51)</td>
</tr>
<tr>
<td>5</td>
<td>Ambasamudram</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(49)</td>
</tr>
<tr>
<td>6</td>
<td>Vallioor</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(48)</td>
</tr>
<tr>
<td>7</td>
<td>Thisayanvilai</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(50)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>380</strong></td>
</tr>
</tbody>
</table>

Figures in parentheses are in percentages to the respective row total.
The data has been collected on the basis of the above target and the focus has been given on the buyers of supermarkets. In order to have better clarity the sample areas have been categorized into three. They are urban, semi-urban and rural areas. Tirunelveli Municipal Corporation is considered as urban area; Kadayanallur, Tenkasi, Sankarankoil, Ambasamudram, Vallioor and Thisayanvilai are considered as semi-urban area; and buyers from villages has been categorized as rural area. In the case of rural respondents, as their population cannot be determined for this study, no specific target has been fixed for them and in the flow of data collection from the urban and semi-urban areas such respondents are also included. In this study, the researcher obtained the following response from different areas.

**Table 1.5**

**Area-wise Response level of respondents**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Gender</th>
<th>Nature of living place</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Urban (61.3)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Male</td>
<td>141</td>
<td>272 (71.6)</td>
</tr>
<tr>
<td>2</td>
<td>Female</td>
<td>131</td>
<td>244 (62.9)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>90 (58.8)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>272 (58.5)</td>
<td>516 (67.2)</td>
</tr>
</tbody>
</table>

(Figures in parentheses are the response percentage to the targeted sample)

The above table shows the response level from the respondents of different geographical area. In total, there was a moderate response of 67.2 percent from the total targeted respondents. Among the all
geographical area, the response from male (71.6 percent) was better than the female (62.9 percent). Moreover, comparing to the urban area, the semi-urban respondents show good (61.7 percent) response than the urban respondents (58.5 percent).

1.8.7. Statistical Tools applied

Result of each consumer's responses to the survey is compared to their panel data, which containing their purchases over a period of one year time frame. The panel data contains information on total purchases, frequency of store visits and quantum of purchase. The research design is made in such a manner so that it will allow the researcher to compare each consumer's attitudes towards the supermarkets their shopping behaviour in order to assess the impact of consumer perceptions on the establishment of behavioral loyalty toward the supermarket. Loyalty is measured by Recency, Frequency and Monetary Value (RFM-measure of how recently, how frequently and the amount of spending exhibited by a customer).

Mean

In many parts of this study different types of arithmetic mean were applied. In case of questions based on Likert five point scale, simple weighted arithmetic mean had been applied using the following formula

\[
\bar{X}_w = \frac{\sum WX}{\sum W}
\]

Where  \( \bar{X}_w \)  = Weighted arithmetic mean
\( X \)  = Variable values, i.e., \( X_1, X_2, X_3, \ldots, X_n \)
\[ W = \text{Weights attached to variables values, i.e., } W_1, W_2, W_3, ..., W_n, \text{ respectively} \]

In case of data having continuous frequency distribution, the arithmetic mean was calculated using the following formula.

\[ \overline{X} = A + \frac{\sum fd}{N} \]

Where \( \overline{X} = \text{Arithmetic mean} \)
\( A = \text{Assumed mean} \)
\( d = (X - A) \)
\( N = \text{Total number of observations} \)

**Chi-square test**

The Chi-Square \((\chi^2)\) test is a statistical tool used to examine differences between nominal or categorical variables. This test compares the observed data with expected data according to a specific hypothesis. Mostly a null hypothesis will be framed and that will be tested with the help of the chi-square test. In this research work, several null hypotheses have been framed and this test has been applied. The formula used for chi-square test is given below.

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

Where \( O = \text{The observed frequencies} \)
\( E = \text{The expected frequencies} \)
\( \Sigma = \text{The 'sum of'} \)

When the calculated value of the chi-square test is higher than the table value at 5 percent significance level, then the hypothesis is rejected and the decision is made accordingly.
One-way Analysis of variance (ANOVA)

The ANOVA is used to know the existence of any difference between groups on some variable. Normally, this test is applied to know existence of the differences between mean of various groups (more than two groups). The one-way ANOVA is used to assess whether the expected values of a quantitative variable within several pre-defined groups differ from each other.

In a research work, we cannot analyse the entire population, thus we take few groups for the analysis. Thus we must know that whether the mean of the taken populations are similar or there exists any significant differences between them. It is also called as F-test. This F-test is made with help of a null hypothesis. In this research work many hypotheses have been framed to know the similarity of the mean. In order to make the F-test in one-way ANOVA, the following set of formulae is used.

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>Degrees of freedom (df)</th>
<th>Sum of squares (SS)</th>
<th>Mean square (MS)</th>
<th>F ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Samples (C)</td>
<td>K - 1</td>
<td>SSC = ( \sum_{k=1}^{K} \frac{T_{k}^{2}}{n_{k}} - \frac{T^{2}}{N} )</td>
<td>( MSC = \frac{SSA}{K-1} )</td>
<td>( F = \frac{MSC}{MSE} )</td>
</tr>
<tr>
<td>Within Samples (E)</td>
<td>N - K</td>
<td>SSE = SST - SSC</td>
<td>MSE = ( \frac{SSE}{N-K} )</td>
<td></td>
</tr>
<tr>
<td>Total (T)</td>
<td>N - 1</td>
<td>SST = ( \sum_{i=1}^{n} \sum_{k=1}^{K} X_{i,k}^{2} - \frac{T^{2}}{N} )</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Where  
\[ K = \text{The number of samples} \]
\[ N = \text{The total number of all the observations} \]
After forming the variance analysis table, the calculated $F$ value must be compared with Table value of $F$ which is computed as $(K-1)$ and $K(n-1)$ at the significant level of 0.05. If the calculated value of $F$ is bigger than the table value of $F$, the Null hypothesis ($H_0$) would be rejected. It means that groups Mean have difference with each other. At the same time, if the calculated value of $F$ is smaller than table value, Null hypothesis ($H_0$) will be accepted; it means that groups Mean do not have difference with each other.

**Garrett Ranking Technique**

This technique is used when a question is based on the rank orders. In this study, respondents were asked to rank the reasons for getting membership card in a supermarket and this question was analysed with the help of this technique. The Garrett ranking is done with the help of the following formula.

$$\text{Score} = \frac{100(R_{ij} - 0.5)}{N_j}$$

Where $R_{ij} =$ Rank given for the $i^{th}$ variable by the $j^{th}$ respondent

$N_j =$ Number of variables ranked by the $j^{th}$ respondent

The percentage position of each rank obtained was converted into scores by referring to the table given by Henry Garrett. Then for each factor the scores of individual respondents were added together and divided by the total number of respondents for whom the scores were added. These Mean scores for all the factors were arranged in the order of their ranks and inferences were drawn.
**Factor Analysis**

Factor analysis is primarily a data reduction and summarization technique. In the study of buyer behaviour more number of variables may be accentuated for the behaviour. Too many data will not provide a concrete solution rather it may perplex the reader. Thus these variables have to be correlated and they have to be reduced to manageable level for convenience and better analysis. In order to accomplish this, factor analysis is used to establish relationships among sets of many interrelated variables in terms of few factors. As the factor analysis will provide a meaningful conclusion, this tool has been applied by the researcher. The factor analysis model in matrix rotation is given as

\[ X = Af + e \]

Where \( X = [X_1, X_2, X_3, \ldots \ldots, X_p] \)

\( f = [f_1, f_2, f_3, \ldots \ldots, f_m] \)

\( e = [e_1, e_2, e_3, \ldots \ldots, e_p] \)

\( M = \text{number of factor} \)

\( P = \text{number of variables} \)

**Principal Component Analysis (PCA)**

A principal component can be defined as a linear combination of optimally weighted observed variables. The general form for the formula to compute scores on the first component extracted (created) in a principal component analysis is given below:

\[ C_1 = b_{11} (x_1) + b_{12} (x_2) + \ldots b_{1p} (X_p) \]

Where \( C_1 = \text{the participant’s score on principal component 1 (the first component extracted)} \);
The regression coefficient (or weight) for observed variable p, as used in creating principal component 1; $X_p$ = the participant's score on observed variable p.

**Exploratory Factor Analysis (EFA)**

Factor analysis (FA) and Principal Components Analysis (PCA) are the techniques used, when the researcher is interested in identifying a smaller number of factors underlying a large number of observed variables. Variables that have a high correlation between them and are largely independent of other subsets of variables are combined into factors. A common usage of PCA and FA is in developing objective instruments for measuring constructs which are not directly observable in real life.

Factors are produced by FA, while components are produced by PCA. Both FA and PCA essentially are data reduction techniques. Mathematically, the difference is in the variance of the observed variables that is analyzed. In PCA, all the variance in the observed variables is analyzed whereas in FA, only shared variance is analyzed. Even though PCA is different from other techniques of FA, at many places it is treated as one of the FA techniques. For this reason, the word components and factors are interchangeably used in this study.

**KMO test:**

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy is an index for comparing the magnitudes of the observed correlation coefficients to the magnitudes of the partial correlation coefficients used to examine the appropriateness of data for factor analysis. High
values (between 0.5 and 1.0) indicate factor analysis is appropriate. Values below 0.5 imply that factor analysis may not be appropriate.

**Bartlett’s Test of Sphericity**

It is one of the statistics associated with factor analysis. It is a test statistic used to examine the hypothesis that the variables are uncorrelated in the population. The Bartlett’s test of sphericity is to test the null hypothesis that the variables are uncorrelated in the population. In other words, the population correlation matrix is an identity matrix. An identity matrix is the matrix in which all of the diagonal elements are 1 and all off diagonal elements are 0. Thus Bartlett’s test of sphericity examines the suitability of data for the factor model.

**Confirmatory Factor Analysis**

Under the CFA the reliability of the latent construct is tested. The reliability of the latent construct can be identified by examining the convergent validity of the measurements items by standardized factor loadings, composite reliability and the variance-extracted measure. Standardized loading and t-value are to be estimated to display the convergent validity of the constructs comprising more than two factors. The reliability of latent factors has been assessed by calculating a composite reliability for each construct. The composite reliability was calculated as:

\[
CR_\eta = \frac{\left(\sum \lambda_{yi}\right)^2}{\left(\sum \lambda_{yi}\right)^2 + \sum Var(\epsilon_i)}
\]
Where $CR_\eta = \text{composite reliability for scale } \eta$; $\lambda_{yi} = \text{standardized loading for scale item } y_i$ and $\varepsilon_i = \text{measurement error for scale item } y_i$. Along with the reliability calculations, the parameter estimates and their associated $t$-values as well as the average variances extracted are also to be examined. The average variance extracted was calculated as:

$$V_\eta = \frac{\left(\sum \lambda_{yi}^2\right)}{\left(\sum \lambda_{yi}^2\right) + \sum \text{Var}(\varepsilon_i)}$$

Where $V_\eta = \text{average variance extracted for } \eta$; $\lambda_{yi} = \text{standardised loading for scale item } y_i$ and $\varepsilon_i = \text{measurement error for scale item } y_i$. The construct is considered as having convergent validity when the each construct is greater than 0.5 and the $t$-value is significant. The $t$-value is considered as significant when it is greater than 1.96. However, very often variance extracted estimates will be below, even when reliabilities are acceptable. Based on the above, the convergent validity has been identified.

**Cronbach's Coefficient alpha**

In this research work, Cronbach's coefficient alpha has been used to know the internal consistency and reliability on the data where Likert type response has been collected. Cronbach's alpha can be written as a function of the number of test items and the average

---

inter-correlation among the items. The formula for the standardized Cronbach's alpha is given below.

\[ \alpha = \frac{N \cdot \bar{c}}{v + (N - 1) \cdot \bar{c}} \]

Here N is equal to the number of items, c-bar is the average inter-item covariance among the items and v-bar equals the average variance.

**Multiple Discriminant Analysis**

It is a statistical technique used to reduce the differences between variables in order to classify them into a set number of broad groups. It is also termed as Discriminant Factor Analysis and Canonical Discriminant Analysis. This tool was applied to know the discriminant factor for preferring a supermarket among the buyers of different areas.

**Paired t-test**

This analysis was done in order to measure the gap between the customers' expectations and their perceptions on the supermarket, based on the thirty items or attributes pertaining to the Retail Service Quality. In computing the paired-t test of five dimensions' scores, thirty statements of the five dimensions in the questionnaire which represent the expectations and perceptions statements were grouped and linked according to the five dimensions

\[ t = \frac{\sum d}{\sqrt{\frac{n(\sum d^2) - (\sum d)^2}{n-1}}} \]
Where \[ \sum d = \text{Sum of differences between pairs of variables in two samples} \]
\[ \sum d^2 = \text{Sum of squired value of difference between all the pairs of variables in two samples} \]
\[ (\sum d)^2 = \text{Squired value of sum of differences between pairs of variables in two samples} \]
\[ N = \text{Number of pairs in the data} \]

1.9. Limitations of the study

This study is subject to some limitations. The study was conducted among the buyers in supermarkets in Tirunelveli District only. Therefore, findings and conclusion drawn out of the study cannot be generalised for other places. Since the study area stretch over a vast area the researcher could not meet all the respondents directly and he was compelled to use only questionnaire. Therefore, error due to cognitive skill may have crept into the data. Since there is no tool is available for identifying such errors, the researcher had to accept the data as it was supplied by the respondents. Another limitation identified was number of supermarkets in semi-urban areas. In semi-urban areas, the researcher could find few supermarkets only and it would be better if more number of supermarkets were functioning.

1.10. Chapter Scheme

This research work has been divided into seven sections. Each section is organised as a chapter and following is the chapter scheme.

The first chapter is entitled as "Introduction and research design". It states the way in which the research work is done. It
provides the statement of problem, the objectives, hypothesis framed and analysed, research methodology used, sampling method followed, statistical tools applied for analysing the data, period of study and chapter scheme.

The second chapter is given the title “Review of previous studies”. It encompasses the literary review of previous studies done in two heads. The first head deals with studies made in the global level and another head deals with the research work done at Indian level. The researcher has focused mostly on the studies done on buyer point of view. All the previous studies were reviewed chronologically for the past ten years starting from 1998. It also provides the research gap identified by the researcher.

The third chapter is entitled as “Conceptual framework of retail supermarket”. This chapter focuses on the theoretical frame work of retail supermarket. It elaborates on the retail and retailing, provides definition on supermarket, classifies the retail formats, explores the historical background of supermarket and throws light on the current trend of supermarkets at global, Indian and Tamil Nadu level. It also states the current trend on retail supermarkets in the study area.

The fourth chapter holds the title “Demographic profile of buyers in supermarket in Tirunelveli district”. This chapter is analytical in nature and it analyses on the demographic profile of respondents in relation to the research topic. In addition to the general demographic profile it also covers the preferred supermarket
by the respondents, preferred timing for shopping in a supermarket and so on.

The fifth chapter is entitled as “Buying process and attitude of buyers towards the supermarket”. This chapter is another analytical chapter. It analyses the attitude of buyers towards supermarket. It explores the latent reasons for preferring a supermarket. In addition, this chapter also analyses the attitude of buyers towards membership cards and private brands.

The title of the sixth chapter is “Analysis on the perception of buyers on the service quality of supermarkets and their level of satisfaction”. This chapter is another core analytical chapter. It probes into the perceptual level of buyers on supermarket. The perception of buyers has been analysed in comparison to their expectations towards supermarket. Also it attempts to measure the level of satisfaction of buyers towards the supermarket.

The seventh chapter is summation of the research work and it is entitled as “Summary of findings, conclusion and suggestions”. This chapter provides findings of the research work. Based on the findings, conclusion has been drawn and relevant suggestions are given for the supermarkets in the study area. In addition, scope for further research is also given in this chapter.