Introduction and research design
1.1 INTRODUCTION

Retail is defined as any business that directs its marketing efforts towards satisfying the final customer based upon the organization of selling goods and services as a means of distribution\(^1\). The word retail refers to sale of something in general. The concept of retail has been amongst people from time immemorial, only that it has undergone a terrific transformation from the crude barter system to this day’s mall culture. The Barter system was obviously the earliest form of retailing ever done by humans. It is an economic strategy in which two parties, trade certain commodities or services that each of them need, to subsist. The Barter system, however, had to die away as after some time, people felt that this was not a proper system as it did not correspond to the goods given and received so, they found out that in that position needs to be a weighing scale for this exchange where small silver coins were developed and later due to modern developments, money was made the official exchange system for goods.

The introduction of the monetary system further brought in a distinction in the class of people practicing sale of goods for money. They were known as traders and they put up little shops where business was carried on. Later on, for the convenience of the buyers all the traders got together and set up markets which usually were placed in major urban centers and hence an organized pattern of retailing took birth, which proceeds to occupy a central gene in the conclusion of the economic condition of a special site.

Retailing has been one of the major sources of economic system in almost all countries in the world. The extent to which each country gains often determines the reason for superiority and prosperity of the exceptional country. As a retail business

continued to produce more and more innovation was brought in the basic idea of retailing in order to pull in the customers by building an unconventional outlook to the whole performance of a retail line. Hence, in that respect have always been lots of changes over time.

1.1.1 Landmarks in the Modern World of Retail

a) **The Creation of Departmental Stores (late 1800s).** The late 1800's saw the creation of many department stores, including Macy’s, Bloomingdale’s, Marshall Field’s, Hudson’s, and Wanamaker’s. Wanamaker has been accredited with creating price tags, the first in-store restaurant, and the first retailer to use newspaper advertising.

b) **Mail-order Businesses.** At the turn of the century, retailing was dominated by the mail-order business. The Homestead Act of 1862 allowed catalogs to be shipped at a postage rate of one cent per pound to aid the westward expansion. In 1896, the advent of rural free delivery made the mail-order business quite economical.

c) **1900 – 1945 The Beginning of the Modern Retailing Era.** The department stores in the major American cities were thriving and became the shopping destination for affluent American consumers. As markets became more commonplace, shopping centers were starting to be made all over the U.S. to satisfy the developing demands of the 20th century shopper.

d) **1945 – 1975 ‘Baby Boomers’ Create Retail ‘Boom’.** Following World War II, the ‘baby boom’ aura caused an expansion in retail as retailers tried to keep up with the increasing demand of consumers. Improvements in infrastructure created major new highways and big shopping centers were built across the United States. The introduction of credit cards increased consumer spending
and television advertisements produced a new means for retailers to link up with consumers.

e) 1975 – 2000 – Rise of the Big Box Stores. Big Box stores emerged into the retail market, offering an expanded classification of one category of goods. Everything from electronics to sporting goods to office supplies, these stocks would dominate their respective divisions. Wal-Mart became the market leader, and in concert with the rise of the big box stores, started the decline of the department store.

f) 2000 – Present E-tailing vs. ‘Brick and Mortar’ Retailers. The launch of the ‘World Wide Web’ in 1991, created the next revolution in retail, with the entry of online retailing. With a growth of five times the pace of traditional retailing, online retailing has forced most retailers to adapt their business models and create online and mobile sites in order to stay competitive. Social media and technological advancements have enabled retailers to connect up with consumers in ways that were not available a few years ago. The inability to adapt caused the collapse of many established retailers.

g) Implication of the Development of Social Media. With the advent of cable TV and the growth of the internet, the Indian consumer is more aware of what the marketplace, both national and international has to suggest. He is mindful of the lifestyles of the affluent markets and the levels of aspirations have increased. The retailer thus needs to present a product in line with what is sold internationally, to satisfy the consumer. The consumer has become demanding in terms of product offered its quality, price and the tier of service. Knowledge consumers are rampant in the society.²

²http://acudesignservices.com/retail/2013/06/history-of-retail-how-retail-has-evolved-over-the-last-170-years
1.1.2 Growth of Retail Sector.

There is an immense potential for the retail sector. In 2012, Food and Grocery accounted for nearly 60 per cent of total revenues in the retail sector in India.

**Exhibit 1.1**

*Retail Sector Growth*


The supremacy of unorganized sector in retail which includes Kirana Shops in India can be well viewed from the below chart. The single major advantage India has been, the age group from 15-65, which is a major percentage of population has created a market for luxury products.
Chart 1.1
Organized Vs Unorganized Sector

Source: Deloitte’s India Retail Market Report, Booz and Company Analysis and Forbes
The 2011 Global Retail Development Index is reproduced below

Table 1. Global Retail Development Index

<table>
<thead>
<tr>
<th>2011 rank</th>
<th>Country</th>
<th>Region</th>
<th>Market attractiveness (25%)</th>
<th>Country risk (25%)</th>
<th>Market saturation (25%)</th>
<th>Time pressure (25%)</th>
<th>GRII score</th>
<th>Change in rank compared to 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Brazil</td>
<td>Latin America</td>
<td>100.0</td>
<td>79.4</td>
<td>42.0</td>
<td>60.0</td>
<td>71.5</td>
<td>+4</td>
</tr>
<tr>
<td>2</td>
<td>Uruguay</td>
<td>Latin America</td>
<td>82.0</td>
<td>73.6</td>
<td>63.0</td>
<td>53.0</td>
<td>65.5</td>
<td>+0</td>
</tr>
<tr>
<td>3</td>
<td>Chile</td>
<td>Latin America</td>
<td>84.3</td>
<td>109.0</td>
<td>47.3</td>
<td>39.0</td>
<td>54.7</td>
<td>+3</td>
</tr>
<tr>
<td>4</td>
<td>India</td>
<td>Asia</td>
<td>20.0</td>
<td>59.9</td>
<td>10.1</td>
<td>100.0</td>
<td>63.0</td>
<td>-1</td>
</tr>
<tr>
<td>5</td>
<td>Kuwait</td>
<td>MENA</td>
<td>80.4</td>
<td>99.6</td>
<td>57.7</td>
<td>26.7</td>
<td>61.3</td>
<td>-3</td>
</tr>
<tr>
<td>6</td>
<td>China</td>
<td>Asia</td>
<td>16.0</td>
<td>72.6</td>
<td>21.0</td>
<td>97.7</td>
<td>61.2</td>
<td>-5</td>
</tr>
<tr>
<td>7</td>
<td>Saudi Arabia</td>
<td>MENA</td>
<td>76.0</td>
<td>80.7</td>
<td>50.6</td>
<td>25.7</td>
<td>59.5</td>
<td>-3</td>
</tr>
<tr>
<td>8</td>
<td>Peru</td>
<td>Latin America</td>
<td>58.8</td>
<td>61.5</td>
<td>72.0</td>
<td>59.5</td>
<td>58.2</td>
<td>11</td>
</tr>
<tr>
<td>9</td>
<td>United Arab Emirates</td>
<td>MENA</td>
<td>87.6</td>
<td>88.9</td>
<td>12.6</td>
<td>42.9</td>
<td>88.0</td>
<td>-2</td>
</tr>
<tr>
<td>10</td>
<td>Turkey</td>
<td>MENA</td>
<td>83.8</td>
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<td>45.0</td>
<td>77.0</td>
<td>67.9</td>
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<tr>
<td>11</td>
<td>Lebanon</td>
<td>MENA</td>
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<td>52.0</td>
<td>57.5</td>
<td>52.0</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Egypt</td>
<td>MENA</td>
<td>72.1</td>
<td>44.5</td>
<td>85.5</td>
<td>52.7</td>
<td>52.5</td>
<td>+1</td>
</tr>
<tr>
<td>13</td>
<td>Albania</td>
<td>Eastern Europe</td>
<td>19.9</td>
<td>43.3</td>
<td>79.6</td>
<td>60.5</td>
<td>52.1</td>
<td>-1</td>
</tr>
<tr>
<td>14</td>
<td>Russia</td>
<td>Eastern Europe</td>
<td>76.2</td>
<td>48.1</td>
<td>34.9</td>
<td>31.0</td>
<td>51.3</td>
<td>-4</td>
</tr>
<tr>
<td>15</td>
<td>Kazakhstan</td>
<td>Asia</td>
<td>19.2</td>
<td>30.1</td>
<td>67.5</td>
<td>60.1</td>
<td>51.7</td>
<td>N/A</td>
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<td>Indonesia</td>
<td>Asia</td>
<td>38.2</td>
<td>52.9</td>
<td>54.5</td>
<td>58.9</td>
<td>51.1</td>
<td>0</td>
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<tr>
<td>17</td>
<td>Morocco</td>
<td>MENA</td>
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<td>72.9</td>
<td>50.9</td>
<td>54.8</td>
<td>50.8</td>
<td>-2</td>
</tr>
<tr>
<td>18</td>
<td>Philippines</td>
<td>Asia</td>
<td>26.2</td>
<td>54.3</td>
<td>66.1</td>
<td>51.0</td>
<td>49.4</td>
<td>-4</td>
</tr>
<tr>
<td>19</td>
<td>Tunisia</td>
<td>MENA</td>
<td>31.5</td>
<td>75.2</td>
<td>63.0</td>
<td>21.3</td>
<td>49.3</td>
<td>-7</td>
</tr>
<tr>
<td>20</td>
<td>Sri Lanka</td>
<td>Asia</td>
<td>9.4</td>
<td>52.6</td>
<td>80.5</td>
<td>42.4</td>
<td>47.5</td>
<td>N/A</td>
</tr>
<tr>
<td>21</td>
<td>Malaysia</td>
<td>Asia</td>
<td>35.9</td>
<td>64.0</td>
<td>18.0</td>
<td>52.7</td>
<td>47.2</td>
<td>-4</td>
</tr>
<tr>
<td>22</td>
<td>Mexico</td>
<td>Latin America</td>
<td>74.6</td>
<td>67.5</td>
<td>16.3</td>
<td>23.8</td>
<td>45.0</td>
<td>+3</td>
</tr>
<tr>
<td>23</td>
<td>Vietnam</td>
<td>Asia</td>
<td>8.4</td>
<td>35.0</td>
<td>48.8</td>
<td>85.1</td>
<td>44.3</td>
<td>-9</td>
</tr>
<tr>
<td>24</td>
<td>Colombia</td>
<td>Latin America</td>
<td>45.7</td>
<td>54.0</td>
<td>35.9</td>
<td>36.9</td>
<td>43.1</td>
<td>+2</td>
</tr>
<tr>
<td>25</td>
<td>Argentina</td>
<td>Latin America</td>
<td>60.4</td>
<td>28.6</td>
<td>44.2</td>
<td>18.4</td>
<td>42.4</td>
<td>N/A</td>
</tr>
<tr>
<td>26</td>
<td>South Africa</td>
<td>Sub-Saharan Africa</td>
<td>46.0</td>
<td>84.3</td>
<td>15.2</td>
<td>17.2</td>
<td>42.2</td>
<td>-2</td>
</tr>
<tr>
<td>27</td>
<td>Panama</td>
<td>Latin America</td>
<td>44.3</td>
<td>47.3</td>
<td>44.5</td>
<td>27.6</td>
<td>40.9</td>
<td>N/A</td>
</tr>
<tr>
<td>28</td>
<td>Dominican Republic</td>
<td>Latin America</td>
<td>36.5</td>
<td>5.0</td>
<td>74.2</td>
<td>49.9</td>
<td>40.7</td>
<td>-5</td>
</tr>
<tr>
<td>29</td>
<td>Iran</td>
<td>MENA</td>
<td>35.5</td>
<td>34.9</td>
<td>79.2</td>
<td>31.0</td>
<td>39.8</td>
<td>N/A</td>
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<tr>
<td>30</td>
<td>Bulgaria</td>
<td>Eastern Europe</td>
<td>45.1</td>
<td>56.2</td>
<td>4.9</td>
<td>90.2</td>
<td>39.1</td>
<td>-11</td>
</tr>
</tbody>
</table>

Legend:
- O=Low attractiveness
- O=High risk
- G=Saturated
- T=No time pressure

Notes: MENA = Middle East and North Africa
Scores are rounded.

(As published in International Journal of Retailing and Marketing, ISSN NO 0976-318XReg. No. DELENG/2010/32112, Retailing at the cusp of growth).
### 1.1.3 Share of Organized Retail in Selected Countries, 2006

#### Table 1.2

**Countrywise Organized Retail**

<table>
<thead>
<tr>
<th>Country</th>
<th>Total Retail Sales (US$ bn)</th>
<th>Share of Organized Retail (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>2,983</td>
<td>85</td>
</tr>
<tr>
<td>Japan</td>
<td>1,182</td>
<td>66</td>
</tr>
<tr>
<td>China</td>
<td>785</td>
<td>20</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>475</td>
<td>80</td>
</tr>
<tr>
<td>France</td>
<td>436</td>
<td>80</td>
</tr>
<tr>
<td>Germany</td>
<td>421</td>
<td>80</td>
</tr>
<tr>
<td>India</td>
<td>322</td>
<td>4</td>
</tr>
<tr>
<td>Brazil</td>
<td>284</td>
<td>36</td>
</tr>
<tr>
<td>Russia</td>
<td>276</td>
<td>33</td>
</tr>
<tr>
<td>Korea, South</td>
<td>201</td>
<td>15</td>
</tr>
<tr>
<td>Indonesia</td>
<td>150</td>
<td>30</td>
</tr>
<tr>
<td>Poland</td>
<td>120</td>
<td>20</td>
</tr>
<tr>
<td>Thailand</td>
<td>68</td>
<td>40</td>
</tr>
<tr>
<td>Pakistan</td>
<td>67</td>
<td>1</td>
</tr>
<tr>
<td>Argentina</td>
<td>53</td>
<td>40</td>
</tr>
<tr>
<td>Philippines</td>
<td>51</td>
<td>35</td>
</tr>
<tr>
<td>Malaysia</td>
<td>34</td>
<td>55</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>34</td>
<td>30</td>
</tr>
<tr>
<td>Vietnam</td>
<td>26</td>
<td>22</td>
</tr>
<tr>
<td>Hungary</td>
<td>24</td>
<td>30</td>
</tr>
</tbody>
</table>

*Source Planet Retail nd Technopak Advisers Pvt. Ltd*
1.1.4 Indian Retail-Share of Categories (Billion US $)

Table 1.3

Categorywise Retail Share

<table>
<thead>
<tr>
<th>S. No</th>
<th>Category</th>
<th>2006</th>
<th>2011</th>
<th>2016</th>
<th>CAGR%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2011=16</td>
</tr>
<tr>
<td>01</td>
<td>Food and Grocery</td>
<td>217</td>
<td>325</td>
<td>425</td>
<td>5.50</td>
</tr>
<tr>
<td>02</td>
<td>Restaurants &amp; Food Junction</td>
<td>4.6</td>
<td>8.8</td>
<td>15.8</td>
<td>12.50</td>
</tr>
<tr>
<td>03</td>
<td>Apparel</td>
<td>25</td>
<td>35</td>
<td>50.2</td>
<td>7.50</td>
</tr>
<tr>
<td>04</td>
<td>Furniture &amp; Furnishings</td>
<td>6.5</td>
<td>9.1</td>
<td>17.1</td>
<td>13.50</td>
</tr>
<tr>
<td>05</td>
<td>Healthcare &amp; fitness services</td>
<td>0.4</td>
<td>1</td>
<td>2.5</td>
<td>20.00</td>
</tr>
<tr>
<td>06</td>
<td>Consumer electronics &amp; Info technology</td>
<td>16.5</td>
<td>22.7</td>
<td>42.8</td>
<td>13.50</td>
</tr>
<tr>
<td>07</td>
<td>Pharmacy</td>
<td>8</td>
<td>13.9</td>
<td>23.4</td>
<td>11.00</td>
</tr>
<tr>
<td>08</td>
<td>Jewellery &amp; watches, etc.</td>
<td>16.5</td>
<td>25.6</td>
<td>44.2</td>
<td>11.50</td>
</tr>
<tr>
<td>09</td>
<td>Beauty services</td>
<td>0.6</td>
<td>1.3</td>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td>10</td>
<td>Footwear</td>
<td>3.6</td>
<td>4.5</td>
<td>8.3</td>
<td>13.00</td>
</tr>
<tr>
<td>11</td>
<td>Others</td>
<td>11</td>
<td>23</td>
<td>42.5</td>
<td>13.10</td>
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<tr>
<td></td>
<td>Total US$ (Bn)</td>
<td>310</td>
<td>420</td>
<td>675</td>
<td>7.50</td>
</tr>
</tbody>
</table>

Source: Computed from Technopak Advisors Pvt. Ltd data

Equally they meet the everyday demands of the customers, small retailers play a significant part in occupying space in the minds of rural customers. Though the impact of supermarkets is visible in Metropolitan cities, in semi metros and small towns the presence of such supermarkets is less and in many places it’s negligible. The Government authorities restrict the entry of supermarkets in towns which are seeing a
population less than 10 lakhs. Even though the penetration of supermarket is gradually increasing the presence of Kirana in Indian market cannot be ruled out.

1.1.5 Share of Organized Sector in Total Retail by Category (Billion US $)

Table 1.4

Categorical Share of Organized Sector

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Retail categories</th>
<th>2006</th>
<th>2011</th>
<th>2016</th>
<th>CAGR % 2011-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Food and Grocery</td>
<td>2</td>
<td>9</td>
<td>34</td>
<td>30.00</td>
</tr>
<tr>
<td>02</td>
<td>Restaurants &amp; Food Junction</td>
<td>0.5</td>
<td>1.5</td>
<td>6</td>
<td>30.00</td>
</tr>
<tr>
<td>03</td>
<td>Apparel</td>
<td>3.5</td>
<td>5.5</td>
<td>8.8</td>
<td>50.00</td>
</tr>
<tr>
<td>04</td>
<td>Furniture &amp; Furnishings</td>
<td>0.4</td>
<td>0.7</td>
<td>1.2</td>
<td>12.00</td>
</tr>
<tr>
<td>05</td>
<td>Healthcare &amp; furnishings</td>
<td>0.1</td>
<td>0.2</td>
<td>0.6</td>
<td>25.00</td>
</tr>
<tr>
<td>06</td>
<td>Consumer Electronics &amp; Information Technology</td>
<td>1.5</td>
<td>4</td>
<td>18</td>
<td>35.00</td>
</tr>
<tr>
<td>07</td>
<td>Pharmacy</td>
<td>0.2</td>
<td>0.8</td>
<td>4.5</td>
<td>41.00</td>
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<td>08</td>
<td>Jewellery, Watches etc.</td>
<td>1</td>
<td>2.5</td>
<td>7.5</td>
<td>25.00</td>
</tr>
<tr>
<td>09</td>
<td>Beauty Services</td>
<td>0.2</td>
<td>0.2</td>
<td>0.5</td>
<td>20.00</td>
</tr>
<tr>
<td>10</td>
<td>Footwear</td>
<td>1</td>
<td>1.7</td>
<td>3.8</td>
<td>17.50</td>
</tr>
<tr>
<td></td>
<td>Total US$ (Bn)</td>
<td>10</td>
<td>20</td>
<td>84</td>
<td>26.00</td>
</tr>
</tbody>
</table>

Source: Computed from Technopak Advisors Pvt. Ltd data

1.1.6 Retailing in India

Comprising of organized and unorganized sectors, Indian retail industry is one of the fastest growing industries, especially over the last few years. It is one of sunshine sectors of our country. India is the fifth largest in the world in terms of the Retail Industry. Though initially, the retail industry in India was unorganized, with the variety of tastes and preferences of the consumers, the industry is becoming more popular these days and becoming organized as well. While India presents a large market opportunity given the number and increasing purchasing power of consumers, there are substantial challenges as well given that over 90% of trade is conducted through
independent local stores. Challenges include Geographically dispersed population, small ticket sizes, complex distribution network, and little use of IT systems, limitations of mass media and existence of counterfeit goods.

1.1.7 History of Retailing in India

The origins of retail business in India can be traced to the emergence of Kirana stores and mom-and-pop stores. These shops used to cater to local people. Step by step the government sets about supporting the rural retail and many indigenous franchise stores came up with the help of Khadi & Village Industries Commission. The economy started to afford up in the 1980's resulting in the change of retailing. The first few companies to bring up with retail chains were in textile sector, for e.g, Bombay Dyeing, S Kumar's, Raymonds, etc. Titan launched retail showrooms in the organized retail

Source Retail Management Functional Principles & practices by Gibson G. Vedamani, PhD. Pg.7 Retail – Organized vs Unorganized or co-existence of Organized & Unorganized? A Ground Zero Report the retail and consumer products sector in Asia (PWC) - 2011 By Pankaj Sharma
sector. With the passage of time new entrants moved on from manufacturing to retailing.\(^3\)

1.1.8 Present Scenario of Retailing in India

The Indian Retail Industry has come forth as one of the most dynamic and the fastest paced industries with several players going into the grocery store. Today, due to retail business the total concept and idea of shopping has undergone an attention drawing change in terms of format and consumer buying behaviour, ushering in a revolution in shopping in the country.

The Indian retail industry is divided into two major categories one is organized and other is unorganized retail sectors. At the beginning most of the retail industry in India was unorganized sector.

This is due to the lack of operational management principles in the field of retail industry. Unorganized retailing is the conventional method of low cost retailing. It consists of unauthorized small shops – traditional Kirana stores, general shops, pavement vendors, convenience shops, corner shops etc, India’s retail sector are largely unorganized retail sector. Organized retailing refers to corporate-backed retail chains and hypermarkets, and also privately owned large retail businesses, those dealers/retailers who are licensed for trading activities and registered to pay taxes to the government.

Most Indian shopping happens in open markets or numerous small grocery and retail stocks. Shoppers typically wait outside the workshop, ask for what they desire, and cannot pick or examine a product from the shelf. Accession to the shelf or product storage area is limited. In one case the shopper requests the food staple or household

\(^3\)http://www.indianmirror.com/indian-industries/retail.html
product they are looking for, the shopkeeper goes to the container or shelf or to the bottom of the computer memory, brings it out and offers it for sale to the shopper.

Often the shopkeeper may substitute the product, claiming that it is similar or equivalent to the product the consumer is asking for. The merchandise typically has no price label in these small retail stores although some products do have a Manufacturer Suggested Retail Price (MSRP) pre-printed on the packaging. The shopkeeper prices the food staple and household products arbitrarily, due to which, two consumers may pay different prices for the same product on the same day. Price is sometimes negotiated between the shopper and shopkeeper. The shoppers do not have time to examine the product label, and do not have a choice to make an informed decision between competitive products.

Modern retail in India has seen a significant growth in the past few years. One report estimates the 2011 Indian retail market as generating sales of about $470 billion a year, of which a minuscule $27 billion comes from organized retail such as supermarkets, chain stores with centralized operations and shops in malls. The orifice of the retail industry to a free market competitor, some claim will enable rapid growth in the retail sector of Indian economy.

Modern retailing has entered into the country and as is mentioned in the form of bustling shopping centers, multi-storied malls and the huge complexes that offers shopping, entertainment and food all under single roof. A large young working population with a median age of 24 years, nuclear families in urban areas, along with increasing working women population and emerging opportunities in the services sector are the key factors in the growth of the organized Retail sector. The optimism about Indian retail is corroborated by the KPMG Retail Survey. More than 70 percent of our survey respondents expect to raise in excess of 40 percent per annum in the next
three years. Mixing in with the growth plans of the retailers we met, modern retailing is
epected to double in terms of the number of releases and retail space in the next three
years, with the emergence of more national retail chains.

**1.1.9 Retail Business in Tamil Nadu**

Tamil Nadu is the 11th largest and the seventh most populous state in India, and
second most economically important state in Southern India. The main reason for its
successful involvement in retail is that it possesses a second largest coastline in India
with a length of 1,076 km and is an important centre for sea trade and owns a national
highway of 2,002 km in length. Chennai is the capital city and a strategic point for
trade and an important port.

**1.1.10 Retailing In Tirunelveli District**

Tirunelveli District is a suburban place in Tamilnadu. In Tirunelveli District, at
that place is no clear distinction between the organized sector and the unorganized
sector due to remote accessibility and socioeconomic status. But today with the passage
of time there is increasing opportunities and necessity of quality products has thus
increased the prospects of successful retailing in Tirunelveli. Even the concept of
organised retailing is still in its nascent stage. In fact the insistence to show a profit, is
building among the supermarket retailers in such rapid pace that the retailers have often
succumbed to the pressure caused and this has led to the closure of at least a dozen of
supermarkets in Tirunelveli district alone. But of late, there has been some success of
organized retailers due to changes in consumer perception towards the buying of
merchandise. In Tirunelveli Municipal Corporation, Aryaas Supermarket has been real
popular. In Tenkasi, Nellai supermarket is quite familiar to people around the place.
And then there are several other proofs to demonstrate the early blossoms of successful,
organized retail businesses in late years.
1.2 STATEMENT OF THE PROBLEM

Liberalisation of the economic system in the nineties and the introduction of big players in the retail business has brought the retail industry into the defile. Great players and national retail chains are changing the rules of the game. The 21st century has taken forth a novel group of consumers who are comfortable cognizant of the value of money, military capability, economic purchasing power than their forerunners. Immediately the younger generations are looking for product quality and service delivery, which was previously not influencing factors of retailing in India.

After supermarkets, departmental stores and convenience stores, Indian retail have seen the concept of hypermarkets coming of age. The hypermarkets are not new to the western countries. Players like Wal-Mart, Metro have established hypermarkets in many states. In India hypermarket concept is in its nascent stage. Retailers like Pantaloons and RPG have started hypermarket operations and they are having plans to expand aggressively to all the parts of India. A neat number of international retailers has an evidence interest in India, despite the absence of favourable government policy for foreign participants.

Our Indian retailing basically revolves around compact self-sufficient stores which often sell mediocre quality products require for everyday purpose. The Indian retail sector is fragmented were most businesses are run by the unorganised retail sector. An unorganized retail sector consists of local Kirana shops, family run general stores, footwear & Apparel shops, Medical shops etc. The unorganized retailers usually do not pay the taxes, and most of them have not even registered. According to statistics, it has been observed that the concept of retailing is undergoing a drastic alteration in its outlook, thanks to organized form of retailing which includes supermarket, mall, hypermarkets, departmental stores and so forth the main factors that have contributed to
this change are strong growth fundamentals, good investment rates, rapid growth in labour, finance, birth of the concept of branding, which has tempted the customers to rely more on quality and attractive offers.

Given the size, the geographical, cultural and socioeconomic diversity of India, there is no role model for Indian suppliers and retailers to adopt or expand in the Indian context. The Industry is witnessing the government of region-specific formats. With organized retail penetrating into B-class Towns, larger discount formats, popularly known as hypermarkets, are today emerging as major rivals for both organized and unorganized retailer.

Penetration of organized retail into the lower income groups and increasing customer demand for value-for-money has improved the fortunes of these formats. It provides customers a broad arena of low–priced products ranging over categories like grocery, processed food, sweet food, apparels and customer durables.

On an average in India, hypermarkets are spread over 50,000 sq. Ft. There are more than 25,000 SKUs (stock Keeping Units). In case of Hypermarkets, the largest part of their operating cost goes towards rentals. High costs arise from labour, social security to employees, high quality real estate, bigger premises, comfort facilities such as air-conditioning, back-up power supply, taxes, etc. Degree of personal interest and information dependency are the two essential elements which move the buying behaviour of the customer.

The Indian retail industry is still a “protected industry” from Foreign Direct Investment (FDI). Though FDI can help generate employment, it may pose strong competition for existing small businesses. Unlike the country’s FDI investment objective of applied science transfer and export promotion in 1980s, today’s infusion of
capital can bring in issues like size of investment, percentage of stake or ownerships in the company and takeovers of domestic companies by foreign giants.

Keeping these factors in mind, it is proposed to do a research on the impact of supermarkets on small retailers. The demographic pattern of Tirunelveli is one of the best samples for doing this research as it resembles our country wherein the contribution of rural market is huge. Hence I have taken this topic on doing my research on the Impact of Supermarkets on Small Retailers in Tirunelveli District, Tamilnadu.

1.3 OBJECTIVES OF THE STUDY

The specific objectives have been framed such that the general objectives can be achieved more easily and effectively.

1.3.1 General Objectives

This research will determine various elements that impress the small retailers while facing stiffer competition from corporations who have evinced keen interest in entering/growing their clientele in the retail marketplace. The supermarkets in the district of Tirunelveli are increasing over the period of time. The objective of this research is to find out the factors that contribute to the growth of supermarkets and those that affect the small retailers. The survey also underscores the importance of retailers and their perceptions about the upcoming supermarkets and hypermarkets.

1.3.2 Specific Objectives

The specific objectives intended in this research are as under

a. To find out the emerging trends in the supermarket.

b. To analyse Impact of Organized Retailing on unorganized retail in Tirunelveli District
c. To find out the recent trends in the supermarket.
d. To understand the demographic profile of the buyers in supermarkets and small retailers in Tirunelveli district.
e. To analyse Growth & Development of Indian Retail Industry
f. To find out the consumer behaviour towards organized (supermarkets/malls, hypermarkets, departmental stores, etc.) and unorganized (local Grocery stores, weekly bazaars etc.) retail stores in Tirunelveli District.
g. To find out the consumer satisfaction level from organized retail stores as well as unorganized retail stores in Tirunelveli District.
h. To analyse Challenges of Modern retailing in Tirunelveli District.

1.4 HYPOTHESES OF THE STUDY

The problem being studied in this research is that of the supermarkets and how to adopt them to the Indian context. The survey looks at the possibility of the malls replacing the small retailers by taking over a flexible strategy which enables it to successfully take over the central characteristics of these small shops and at the same time provide the benefits of the supermarkets. The study undertakes the impact of supermarket on small retailers. In this research, the following hypotheses are tested. Relevant statistical techniques have been applied to prove/disprove the hypotheses made.

a. There is an association between Preference of Supermarkets is influenced by the interest of customers in gathering information when they shop in supermarkets
b. There is an association between consumers’ share shopping experience with friends & colleagues and the recommendations by friends regarding their shopping experience.
c. There is a significant association between the increasing number of supermarkets and the experience of Indian consumers perception that shopping in supermarkets is emotionally rewarding.

d. There is a significant positive association between the product variety and the shopping experience of customers. Wide range of brands affects shopping experience positively. For major purchases, the growing demographic of urban middle class prefers the modern retail outlets due to higher perceived quality and variety of brands.

e. There is no significant association between the demographic profiles such as Gender, Income, Family Type, Family size and the purchase frequency at retail stores.

f. There is an association between the mentioning of manufacturing date & expiry date on the product label and the purchase behaviour of customers.

g. There is no association between the location of supermarkets and business change.

h. There is no significant association between the business running year and business change as both are independent of each other.

i. The cost cutting strategy and business location are independent of each other and hence there is no significant association between both of them.

j. There is no association between the offer discount strategy offered by the supermarkets or the retailers and business location where they are situated.

k. The variables minimize staff strategy and business locations are independent of each other and have no significant association between them.

l. Increased numbers of brand and business locations are independent of each other.
m. There is no significant association between the variables such as better display, self-service, improved home delivery, increased storage space and business locations as they are independent of each other.

n. There is no change seen in customer preferences while shopping for fresh groceries between the unorganized or organized retail outlets.

1.5 DEFINITIONS OF CONCEPTS

In this research the reader may come across some new words related to the subject. Hence, for easier understanding some common concepts used in this research have been highlighted and explained in a brief manner in order to ward off any misconceptions regarding the matter.

1.5.1 Retail Sector

Retail sector includes all the shops that sell goods to the ultimate customer, who buys them for personal and not business use. It tracks all varieties of shops from kiosks/small groceries to supermarket chains and big department stores. In addition to traditional bricks-and-mortar shops, this sector includes mail-order and online businesses.

1.5.2 Consumer

Consumer is an individual who buys products or services for the personal use and not for manufacturing or resale. A consumer is someone who can make the decision whether or not to purchase an item at the store, and someone who can be influenced by marketing and advertisements. When someone goes to a store and purchases a toy, shirt, beverage, or anything else, they are making that decision as a consumer.
1.5.3 Kiosks

Kiosks is a small physical structure that displays information for people walking by. Kiosks are common near the entrances of shopping malls. Kiosks are also used at trade shows and professional conferences. The word is now applied to small booth offering goods and services and to free standing computer terminals. A kiosk is a small, separated garden pavilion open on some or all sides. Kiosks were common in Persia, Indian Subcontinent, and in the Ottoman Empire from the 13th century onward. Kiosks are often set up in malls and other high-traffic locations.

1.5.4 Category Killer

A large retail chain store that is dominant in its product category. This type of store generally offers an extensive selection of merchandise, at prices so low that smaller stores cannot compete.

1.5.5 Chain Store

One of a number of retail stores under the same ownership and dealing in the same merchandise.

1.5.6 Brick and Mortar

Brick-and-mortar store are retail shops with permanent physical locations.

1.5.7 Anchor Store

A major retail store used to drive business to smaller retailers that physically surround it. These larger department stores or grocery stores are generally part of a retail chain and are the prominent business in a shopping mall.
1.5.8 Relationship Retailing

This is a strategy that businesses implement to build loyalty and forge long-term relationships with customers. Relationship Retailing can come in the form of loyalty programs, personalized experiences, or superb customer service.

1.5.9 Discount Stores

Retailers that offer low costs and low customer service.

1.5.10 Drop Shipping

Drop shipping is the process, in which a retailer markets a product, collects payment from the customer and then orders the item from a supplier, which is then sent straight to the customer. The retailer's profit is the divergence between the amount collected and the sum of money passed. No inventory is held and the retailer is not involved in the shipping.

1.5.11 Mark-up

A percentage added to the price to make the retail selling price.

1.5.12 Markdown

A planned reduction in the selling price of an item, usually to take effect either within a certain number of days after seasonal merchandise is received or on a specific day of the month.

1.5.13 Open to Buy

Most retailers establish a upper limit degree of inventory they can afford to have on hand. The open to buy is the amount of merchandise the retailer can still buy before reaching that ceiling.
1.6 AREA OF THE STUDY

This Study was conducted in well-known supermarkets as well as consumer preferred small retail outlets scattered across the Tirunelveli District in the southern state Tamilnadu of India. The survey was done in Rural, urban and semi urban locations of Tirunelveli District. The district consists of one Municipal Corporation, Seven Municipalities and thirty six Town Panchayats. The survey was conducted in rural areas Melacheval, pavoorchathram, Saithinganallur, Alavanthankulam, Pettai, Mundradippu, Vallanadu, Palamadai, Surandai and Alangulam. Field observation showed that the supermarkets are functioning in the places such as Tirunelveli Municipal Corporation, four municipalities and few town Panchayats. The survey was also conducted in many small retail shops in Tirunelveli District. Under urban category, Tirunelveli municipal corporation was selected, and among the semi-urban areas Vallioor, Sankarankoil, Tenkasi, Radhapuram and Ambasamudhram.

1.7 PERIOD OF THE STUDY

The entire study was conducted in between the period April 2007 to June 2014. Therefore the data which has been employed is extremely focused and very specific and are relevant only between the survey period. The secondary data which has been imbibed in this study were not available during the focus period. Therefore, in the case of secondary data, the researcher has used certain data earlier to study the period. Yet the primary data were produced based on the facts gathered up between April 2012 and May 2013.
1.8 RESEARCH METHODOLOGY

This study combines quantitative and qualitative methods. The quantitative impact evaluation uses the difference-in-difference methodology and an econometric model, two widely used methods in impact evaluation. The qualitative impact evaluation is in the sort of in-depth interviews with key witnesses. The survey applied a questionnaire for the retailers and interview guidelines for the key informants as research instruments. The questionnaire contains questions about supermarket and small retailers’ opinions of customers and also questions about their opinion of retailers and the impact of supermarkets on small retailers. Tirunelveli District is taken up for the study to identify the impact of supermarkets on small retailers. Tirunelveli is developing and the fastest growing place in Tamil Nadu. Convenience Sampling Method has been adopted and 120 unorganized small retail business organizations of diverse formats are taken for the survey. Retailers with a floor space of less than 500 sq. feet and located within a distance of 12 km from supermarkets alone are taken for study.

1.8.1 Sample Size

A study of this research the population who are the customers in a supermarket and small retailers in a Tirunelveli District. 269 samples have been collected from various categories of consumers in study area. As this research study deals with impact of supermarket on small retailing, 110 samples of retailers were selected. The retailers sample includes 80 small retailers and 30 supermarkets. These retail units are situated in urban, semi urban and Rural areas. While selecting samples, due weightage was given for income and gender. It is ensured that the data proportionately represent all available groups to determine the general views of
consumers. In this research eight places were selected as targeted area. The targeted area of the sample population is computed in the following way.

**TABLE 1.5**

Sample Distribution

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Name of the Place</th>
<th>Supermarkets</th>
<th>Retailers</th>
<th>Super Market Consumers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number Exists</td>
<td>Sample Size Taken</td>
<td>Number Exists</td>
</tr>
<tr>
<td>1</td>
<td>Tirunelveli</td>
<td>15</td>
<td>11</td>
<td>1,200</td>
</tr>
<tr>
<td>2</td>
<td>Shenkottai</td>
<td>2</td>
<td>2</td>
<td>50</td>
</tr>
<tr>
<td>3</td>
<td>SankarANKoil</td>
<td>5</td>
<td>4</td>
<td>100</td>
</tr>
<tr>
<td>4</td>
<td>Ambasamudram</td>
<td>2</td>
<td>2</td>
<td>40</td>
</tr>
<tr>
<td>5</td>
<td>Vallioor</td>
<td>6</td>
<td>4</td>
<td>50</td>
</tr>
<tr>
<td>6</td>
<td>Tenkasi</td>
<td>7</td>
<td>4</td>
<td>130</td>
</tr>
<tr>
<td>7</td>
<td>Kadaiyanallur</td>
<td>2</td>
<td>2</td>
<td>35</td>
</tr>
<tr>
<td>8</td>
<td>Radhapuram</td>
<td>1</td>
<td>1</td>
<td>40</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>40</strong></td>
<td><strong>30</strong></td>
<td><strong>1,645</strong></td>
<td><strong>80</strong></td>
</tr>
</tbody>
</table>

1.8.2 Pilot study

Before starting the research work, a pilot study was made to have the knowledge of the statement of the problem of this research. The questionnaire was prepared by the researcher. While designing, the consultation was made with experts in retail marketing and few academicians who have been constantly in touch with research programmes. The questionnaire so framed pretested with 75 respondents. Necessary corrections were executed and once again it is tested with ten respondents. Then the questionnaire was finalised.
1.8.3 Data Used

In this research both the primary data, as well as secondary data have been used. The primary data have been employed in order to accomplish the objectives of the research study. The secondary data has been utilized for gathering theoretical and conceptual background in the subject region. Published and unpublished sources of information have been used for the secondary data.

1.8.4 Collection of the Data

Structured questionnaire is used to generate the primary data from the consumers and retailers with a sample size of 269 and 110 respectively. Interview schedules are used for the customers as well as supermarket retailers and small retailers from the store. The questionnaire was finalized after making a protest through the pilot survey. The secondary data were compiled from several books, diaries, magazines, thesis, newspapers research papers and web sites.

1.8.5 District Administration of Tirunelveli District

Tirunelveli District Overview. An official Census 2011 detail of Tirunelveli, a district of Tamil Nadu has been published by the Directorate of Census Operations in Tamil Nadu. Enumeration of key individuals was likewise done by census officials in Tirunelveli District of Tamil Nadu.
Table 1.6

Tirunelveli District At A Glance

<table>
<thead>
<tr>
<th>Description</th>
<th>2011</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Revenue Divisions</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>No. of Taluks</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>No. of Blocks</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>No. of Corporation &amp; Municipalities</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>No of Town Panchayats</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>No of Revenue Villages</td>
<td>628</td>
<td></td>
</tr>
<tr>
<td>No of Panchayat Villages</td>
<td>425</td>
<td></td>
</tr>
</tbody>
</table>

*Source: [http//tnmaps.tn.nic.in/district.php](http://tnmaps.tn.nic.in/district.php)*

**Tirunelveli District Population 2011.** In 2011, Tirunelveli had a population of 3,077,233 of which male and female were 1,520,912 and 1,556,321 respectively. In the 2001 census, Tirunelveli had a population of 2,723,988 of which males were 1,333,939 and remaining 1,390,049 were females. Tirunelveli District population constituted 4.27 percent of the total Tamilnadu population. In the 2001 census, this figure for Tirunelveli District was at 4.36 percent of Tamilnadu population.

Table 1.7

**Population statistics**

<table>
<thead>
<tr>
<th>Description</th>
<th>2011</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual Population</td>
<td>3,077,233</td>
<td>2,723,988</td>
</tr>
<tr>
<td>Male</td>
<td>1,520,912</td>
<td>1,333,939</td>
</tr>
<tr>
<td>Female</td>
<td>1,556,321</td>
<td>1,390,049</td>
</tr>
<tr>
<td>Population Growth</td>
<td>12.97%</td>
<td>8.93%</td>
</tr>
<tr>
<td>Area Sq. Km</td>
<td>6,693</td>
<td>6,693</td>
</tr>
<tr>
<td>Density/km2</td>
<td>460</td>
<td>403</td>
</tr>
<tr>
<td>Proportion to Tamil Nadu Population</td>
<td>4.27%</td>
<td>4.36%</td>
</tr>
</tbody>
</table>

*Source: Census of India 2011*
1.8.6 Analytical Framework

a) Data Reliability Test

Data reliability and validity checks were performed using Cronbach Alpha Test. The purpose of this test is to understand the data reliability. For this test, important key variables and the attribute variables (both supermarkets and small retailers) have been studied. The scales were reversed in the negative statements. Cronbach's alpha is a criterion of internal consistency (reliability). It can be written as a function of the number of test items and the average inter-correlation among the items.

The standardized Cronbach's Alpha

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

Here N is the number of items, c-bar is the average inter-item covariance among the items and v-bar equals the average variance. Cronbach’s alpha reliability coefficient normally ranges between 0 and 1. However, there is actually no lower limit to the coefficient. The closer the Cronbach’s alpha coefficient is to 1.0 the greater the internal consistency of the items in the scale.

Interpretation Norm

<table>
<thead>
<tr>
<th>Cronbach's alpha</th>
<th>Internal consistency</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\alpha \geq 0.9$</td>
<td>Excellent</td>
</tr>
<tr>
<td>$0.7 \leq \alpha &lt; 0.9$</td>
<td>Good</td>
</tr>
<tr>
<td>$0.6 \leq \alpha &lt; 0.7$</td>
<td>Acceptable</td>
</tr>
<tr>
<td>$0.5 \leq \alpha &lt; 0.6$</td>
<td>Poor</td>
</tr>
<tr>
<td>$\alpha &lt; 0.5$</td>
<td>Unacceptable</td>
</tr>
</tbody>
</table>

*Source: Primary Data*
While increasing the value of alpha is partially dependent upon the number of items in the scale, it should be noted that this has diminishing returns. It should likewise be mentioned that an alpha of 0.75 is probably a fair destination. The theoretical value of alpha varies from zero to 1, since it is the ratio of two variances. Even so, depending on the estimation procedure used, estimates of alpha can take on any value less than or equal to 1, including negative values, although only positive values make sense. Higher values of alpha are more desirable. Some professionals, as a rule of thumb, require a reliability of 0.70 or higher (obtained on a substantial sample) before they will use an instrument. Apparently, this formula should be employed with caution when \( r \) has been computed from items that systematically violate its assumptions. Furthermore, the appropriate level of reliability depends upon the purpose of the tool.

b) Correlation Analysis Technique

Correlation analysis, expressed by correlation coefficients, measures the level of linear relationship between two variables. Correlation (Pearson approach) between two variables explains about what extent the variables are related and the direction of the relationship. A correlation coefficient formula is utilized to find how strong a relationship is between data.

Pearson's correlation coefficient when applied to a sample is normally represented by the letter \( r \) and may be referred to as the sample correlation coefficient or the sample Pearson correlation coefficient. We can obtain a formula for \( r \) by substituting estimates of the covariances and variances based on a sample into the formula below. The formula for \( r \) is

\[
r = \frac{\sum_{i=1}^{n}(X_i - \bar{X})(Y_i - \bar{Y})}{\sqrt{\sum_{i=1}^{n}(X_i - \bar{X})^2 \sqrt{\sum_{i=1}^{n}(Y_i - \bar{Y})^2}}}
\]
**Interpretation Norms**

If \( r = +.70 \) or higher Very strong positive relationship

\(+.40 \) to \(+.69 \) Strong positive relationship

\(+.30 \) to \(+.39 \) Moderate positive relationship

\(+.20 \) to \(+.29 \) weak positive relationship

\(+.01 \) to \(+.19 \) No or negligible relationship

\(-.01 \) to \(-.19 \) No or negligible relationship

\(-.20 \) to \(-.29 \) weak negative relationship

\(-.30 \) to \(-.39 \) Moderate negative relationship

\(-.40 \) to \(-.69 \) Strong negative relationship

\(-.70 \) or higher Very strong negative relationship

The correlation coefficient may take on any value between + and - 1. The sign of the correlation coefficient (+, -) defines the direction of the relationship, either positive or negative. A positive correlation coefficient means that as the value of one variable increases, the value of the other variable increases as one decreases the other decreases. A negative correlation coefficient indicates that as one variable increases, the other decreases, and vice-versa.

The formula returns a value between -1 and 1, where

- 1 indicates a strong positive relationship.
- -1 indicates a strong negative relationship.
- A answer of null shows no relationship at all.

The sheer value of the correlation coefficient measures the intensity of the relationship. A correlation coefficient of \( r=0.50 \) indicates a more substantial level of linear relationship than one of \( r=0.40 \). So a correlation coefficient of zero (\( r=0.0 \))
indicates the absence of a linear relationship and correlation coefficients of $r=+1.0$ and
$r=-1.0$ indicate a perfect linear relationship.

The scatter plots presented below perhaps best exemplify how the correlation coefficient changes as the linear relationship between the two variables is changed. When $r=0.0$ the points scatter widely about the plot, the majority fall roughly in the form of a round. As the linear relationship increases, the circle becomes more and more elliptical in shape until the limiting case is reached ($r=1.00$ or $r=-1.00$) and all the points fall along a straight course. A number of scatter plots and their associated correlation coefficients are presented below

**Exhibit 1.2**

**Scatter Plots**

$\begin{align*}
\text{Exhibit 1.2} & \\
\text{Scatter Plots} & \\
\text{Source Primary Data} & \\
c) \text{ Multiple Linear Regression Analysis} & \\
\text{Regression Analysis is the estimation of the linear relationship between a} \\
\text{dependent variable and one or more independent variables or covariates. Linear} \\
\text{Regression estimates the coefficients of the linear equation, requiring one or more} \\
\text{independent variables that best predict the value of the dependent variable. The role of} \\
\text{multiple regression is to discover more about the relationship between various} \\
\text{independent or predictor variables and a dependent or criterion variable. The regression} \\
\end{align*}$
results provide the strength of relationship and contribution weight (towards the dependent variable) of each independent variable. From here, we arrive the key drivers.

While correlation provides a single numeric summary of a relation (called the correlation coefficient), regression analysis results in a "prediction" equation. The equation describes the relation between the variables. If the relationship is strong (expressed by the R Square value), it can be applied to predict values of one variable passed on the other variables have known values. The regression coefficient is the gradient of the regression line and tells you what the nature of the relationship between the variables is. It shows how much change in the independent variables is associated with how much alteration in the dependent variable.

**The Regression Line**

With one independent variable, we may write the regression equation as

\[ Y = a + bX + e \]

Where \( Y \) is an observed score on the dependent variable, \( a \) is the intercept, \( b \) is the slope, \( X \) is the observed score on the independent variable, and \( e \) is an error or residual.

We can extend this to any number of independent variables

\[ Y = a + b_1X_1 + b_2X_2 + \ldots + b_kX_k + e \]

Note that we have \( k \) independent variables and a slope for each. We nevertheless have one error and one intercept. Once more, we want to choose the estimates of \( a \) and \( b \) so as to minimise the sum of squared errors of prediction. The prediction equation is

\[ Y' = a + b_1X_1 + b_2X_2 + \ldots + b_kX_k \]

In multiple regression, we can compute the proportion of variance due to regression. This proportion is called R-square. We use a capital R to show that it's a
multiple R instead of a single variable r. We can also calculate the correlation between 
Y and Y' and square that.

- R is the square root of R-Squared and is the correlation between the 
  observed and forecast values of the dependent variable.

- R-Square is the proportion of variance in the dependent variable which can 
  be predicted from the independent variable. R-Square is also called the 
  coefficient of determination.

- As predictors are added to the model, each predictor will explain some of 
  the variation in the dependent variable simply due to chance.

- One could continue to add predictors to the model which would continue to 
  improve the ability of the predictors to explain the dependent variable, 
  although some of this increase in R-square would be simply due to chance 
  variation in that particular sample.

- The p-value is compared to the alpha level (typically 0.05) and, if smaller, 
  we can conclude that the independent variables reliably predict the 
  dependent variable.

- If the p-value were greater than 0.05, we would say that the group of 
  independent variables does not demonstrate a statistical important 
  relationship with the dependent variable, or that the group of independent 
  variables does not reliably predict the dependent variable.

- B - These are the values for the regression equation for predicting the 
  dependent variable from the independent variable. These are called 
  unstandardized coefficients because they are assessed in their natural units. 
  As such, the coefficients cannot be compared with one another to determine
which one is more influential in the model, because they can be measured on different scales.

- **Beta** - These are the standardized coefficients. These are the coefficients that we would obtain if we standardized all of the variables in the regression, including the dependent and all of the independent variables, and ran the regression.

- By standardizing the variables before running the regression, we have put all of the variables on the same scale, and we can compare the magnitude of the coefficients to see which one has more of an effect.

- We will also notice that the larger betas are associated with the larger t-values.

- $b$ represents the slope of the line. It is calculated by dividing the change in the dependent variable by the change in the independent variable.

- The difference between the actual value of $Y$ and the calculated amount is called the residual. This represents how much error there is in the prediction of the regression equation for the $y$ value of any individual case as a function of $X$.

**d) Factor Analysis**

Factor Analysis is a data reduction & summarization technique. It reduces a complicated data set in a simplified format. Factor analysis aims to identify a great number of variables or questions by merely applying a scaled down set of underlying variables, called factors. It explains a pattern of similarity between observed variables. There are two types of factor analysis exploratory and confirmatory. Exploratory factor analysis is driven by the data, i.e. the data determines the factors. Confirmatory factor analysis, applied in structural equation modelling, tests and confirms hypotheses.
Factor analysis is much employed in customer satisfaction studies to identify underlying service dimensions, and profiling studies to determine core attitudes. For example, as part of a national survey of political opinions, respondents may answer three separate questions regarding environmental policy, reflecting issues at the local, regional and national level. Factor analysis can be used to establish whether the three measures do, in fact, measure the same thing.

It can as well turn out to be useful when a lengthy questionnaire needs to be foreshortened, but still retains key questions. Factor analysis will indicate which questions can be omitted without losing too much information.

Factors are linear combinations of variables.

\[ F1 = W1X1 + W2X3 + \ldots + WkXn \]

- The combinations are based on weighs developed by the analysis
- Weights are called a loadings

Approach

1. Formulate the problem
2. Construct the correlation matrix
3. Identify the method of factor extraction
4. Determine the number of factors
5. Rotate the factors
6. Interpret the factors
7. Use the final data set for further analysis

Kaiser-Meyer Olkin (KMO), measure of sampling adequacy. If KMO $\geq 0.5$, it is desirable. i.e. the number of records we have sufficient to run the factor analysis. In case KMO is $< 0.5$, either we can add more records or drop the factor analysis.
Extraction The process by which the factors are determined from a large set of variables. Factor Extraction helps us in recognizing

- How many components (factors) are needed to represent the variables?
- What do these components (factors) represent?

The concern here is to define the minimum number of constituents that will account for maximum variation in the information.

Principal Component Method of Extraction

- Utilized when the goal is doing data reduction
- To find a linear combination of variables (a component) that accounts for as much variation
- Each component is a weighted linear combination of the variables
- Transforms a set of variables into a new set of variables (components) that are not correlated with each other (*)

\[ C_j = W_{i1}X_1 + W_{i2}X_2 + ... + W_{ip}X_p \]

- The best combination = 1st Principal Component (high variance) = 1st factor
- 2nd PC = Another linear combination of variables, which explains variance, not accounted by 1st PC
- Likewise, it continues - till all the variance is accounted
- Each component becomes a factor

The factor extraction method produces the following results

- Communality matrix
- Component/Factor list
- Eigen Values (Total variance explained by each component/factor)
- The extraction sum of square loadings for each component/factor
- Rotation sum of square loadings for each component/factor
• Scree Plot

Eigen Value  Total Variance Explained

Eigenvalue is the total variance explained by each component/ factor. i.e. The amount of variance in the original variables accounted by each factor/component. The purpose of Factor Analysis is not just to arrive at components / factors. But to summarize the information presented in the original variables. To do this, smaller number of factors should be extracted, based on the Eigen values (most used method).

Eigenvalue is an indicator of the intensity level of the component. By “strength”, it means the amount of variance it accounts for. It is the sum of the squared loadings. We arrange to fix the number of factors which achieve the Eigenvalue > 1.

Varimax Rotation – variables identify with different factors. It is a commonly practiced approach.

Interpreting a Component/ Factor Matrix

• Examine the Factor Matrix of Loadings.
• Factor loadings - the correlations between the factor and the variables.
• The output is sorted in descending order of the factor loading.
• Identify the variables that have large load on the same factor.

e) Chi-Square Analysis

The Chi-Square Test for Independence evaluates the relationship between two variables. The Chi-square statistic is a non-parametric (distribution free) tool designed to analyze group differences when the dependent variable is measured at a nominal level. Like all non-parametric statistics, the Chi-square is robust with respect to the distribution of the data. Specifically, it does not require equality of variances among the study groups or homoscedasticity in the data. It allows evaluation of both dichotomous independent variables, and of multiple group studies. Unlike many other non-
parametric and some parametric statistics, the calculations required to compute the Chi-square provide considerable data about how each of the groups performed in the study.

Conceptually, the chi-square test of independence statistic is calculated by adding the difference between the expected and observed frequencies for each cubicle in the table divided by the expected frequencies for the cell. In other words, chi-square test of independence plugs the observed frequencies and expected frequencies into a formula which computes how the pattern of observed frequencies differs from the pattern of expected frequencies.

Assumptions

- The chi-square test can be applied to find differences in proportions using a two-by-two contingency table. It is still important to understand that the chi-square tests yields only an approximate p-value, on which a correction factor is then used. This alone functions well when your datasets are large enough. No cell has an expected frequency less than 5.

- The chi-square test cannot be used for correlated data

- The null hypothesis is that the two variables are independent. This will be true if the observed counts in the sample are similar to the expected counts.

- The amount of difference needed to make a decision about difference or similarity is the amount corresponding to the alpha level of significance, which will be either 0.05 or 0.01.

- To test the relationship, we use the chi-square test statistic, which follows the chi-square distribution.

- The degree of freedom is equal to $DF = (r - 1) \times (c - 1)$, where $r$ is the number of levels for one categorical variable (say number of rows in the contingency
table), and \( c \) is the number of levels of the other categorical variable (say number of columns in the contingency table),

- We compare observed values with theoretical or expected values. Observed values are those that the researcher obtains empirically through direct observation; theoretical or expected values are prepared on the base of some speculation.

- The test statistic for comparing observed and expected frequencies is

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

where

\[ O \text{ = observed value,} \]
\[ E \text{ = expected value and} \]
\[ K \text{ = number of categories, groupings, or possible outcomes} \]

Expected frequencies The expected frequency counts are computed on an individual basis for one layer of each categorical variable at each degree of the other categorical variable. Compute \( r \times c \) expected frequencies, according to the following formula.

\[
E_{r,c} = \frac{(n_r \times n_c)}{n}
\]

where \( E_{r,c} \) is the expected frequency count for level \( r \) on Variable A and level \( c \) of Variable B, \( n_c \) is the total number of sample observations at the level \( r \) of Variable A, \( n_c \) is the total number of sample observations at level \( c \) of Variable B, and \( n \) is the total sample size.

P-value The P-value is the probability of observing a sample statistic as extreme as the test statistic. If the sample findings are unlikely, given the null hypothesis, the researcher rejects the null hypothesis. Typically, this involves comparing the P-value to the significance level and rejecting the null hypothesis when the P-value is less than the significance level.
If the probability of the test statistic is less than or equal to the probability of the alpha error rate, we eliminate the null hypothesis and conclude that our data supports the research hypothesis. We conclude that there is a relationship between the variables.

If the probability of the test statistic is larger than the probability of the alpha error rate, we fail to reject the null hypothesis. We conclude that there is no relationship between the variables, i.e. they are independent.

Alternatively, we can also check manually through the forecast value of Chi-Square and the statistical table value of Chi-Square. In this case, If the counted value is less than the table value, then accept the Ho (Null hypothesis), else reject HO, and accept H1.

For the manual checking, we need to utilize the following table, by means of the degrees of freedom and significance level set for the test (usually 5%, i.e. \( p=0.05 \)).

**Table 1.9**

<table>
<thead>
<tr>
<th>Degrees of freedom (df)</th>
<th>( \chi^2 ) value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.84 6.64 10.83</td>
</tr>
<tr>
<td>2</td>
<td>5.99 9.21 13.82</td>
</tr>
<tr>
<td>3</td>
<td>7.82 11.34 16.27</td>
</tr>
<tr>
<td>4</td>
<td>9.49 13.28 18.47</td>
</tr>
<tr>
<td>5</td>
<td>11.07 15.09 20.52</td>
</tr>
<tr>
<td>6</td>
<td>12.59 16.81 22.46</td>
</tr>
<tr>
<td>7</td>
<td>14.07 18.48 24.32</td>
</tr>
<tr>
<td>8</td>
<td>15.51 20.09 26.12</td>
</tr>
<tr>
<td>9</td>
<td>16.92 21.67 27.88</td>
</tr>
<tr>
<td>10</td>
<td>18.31 23.21 29.59</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>P value (Probability)</th>
<th>Source</th>
<th>Significant level</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.05</td>
<td>Primary Data</td>
<td>0.01 0.001</td>
</tr>
</tbody>
</table>

Source: Primary Data
f) T-Test for comparing 2 means

The t-test is the most commonly utilized methods to assess the differences in substance between two groups. The primary assumptions of the t-test are

- The samples taken out from the population are independently and normally distributed.
- The divisions of the populations to be compared are equally and unknown.

The test results are compared at 5 % (alpha=0.05) and 10% (alpha=0.10) levels of significance. Based on the comparisons, the interpretation is made.

g) Paired-Samples T Test

The Paired-Samples T Test procedure compares the means of two variables for a single group. It computes the differences between values of the two variables for each case and tests whether the average differs from 0.

This test is different from an independent sample test. It is applied to compare means on the same or related subject over time or in differing conditions. Subjects are often tested in a before-after situation (across time, with some intervention occurring, such as a duet), or subjects are paired such as with twins, or with subject as alike as possible.

Assumptions The observed data are from the same subject or from a matched subject and are drawn from a population with a normal distribution.

Test The paired t-test is actually a test that the difference between the two observations is 0. Thus, if $D$ represents the difference between observations, the hypotheses are

Null Hypothesis $H_0: D = 0$ (the remainder between the two observations is 0)

Alternative Hypothesis $H_1: D \neq 0$ (the difference is not 0)
\[ T_{N,1} = \frac{(1 - \bar{X}^2)}{s} \]

Where \( s = \sqrt{\frac{S1^2 + S2^2}{n}} \)

\( s1 = \) sample variance of before applying the treatment

\( s2 = \) sample variance of after applying the treatment

**Interpretation**

Compare the level of significance \( \alpha \) with the significant value or p-value. If p-value \( \leq \alpha \), we reject the null hypothesis, else we accept the null hypothesis. The conclusion will be based on the interpretation.

**h) Kruskal-Wallis H-Test**

The Kruskal-Wallis test evaluates whether the population medians on a dependent variable are the same across all levels of a factor. To conduct the Kruskal-Wallis test, the cases must have scores on an independent or grouping variable and on a dependent variable. The independent or grouping variable divides individuals into two or more groups, and the dependent variable assesses individuals on at least an ordinal scale. If the independent variable has just two stages, no additional significance tests need to be carried beyond the Kruskal-Wallis test. Nevertheless, if a factor causes more than two levels and the overall test is significant, follow-up tests are normally taken.

**Assumptions**

- Because the analysis for the Kruskal-Wallis test is conducted on ranked scores, the population distributions for the test variable (the scores that the ranks are based on) do not have to be of any particular form (e.g., normal). Nevertheless, these distributions should be continuous and have identical form.

- *Assumption 1* The continuous distributions for the test variable are exactly the same (except their medians) for the different populations.
• **Assumption 2** The cases represent random samples from the populations, and the scores on the test variable are independent of each other.

• **Assumption 3** The chi-square statistic for the Kruskal-Wallis test is only approximate and becomes more accurate with larger sample sizes.

The Kruskal-Wallis H Test is a nonparametric procedure that can be employed to compare the distributions of rank score (i.e. same or different) of multiple attributes

• All $n = n_1 + n_2 + \ldots + n_k$ measurements are jointly ranked (i.e. treat as one large sample).

We apply the sums of the ranks of the $k$ samples to compare the distributions

• Rank the total measurements in all $k$ samples from 1 to $n$. Tied observations are assigned average of the ranks they would have received if not attached.

• Calculate $T_i =$ rank sum for the $i$th sample, $i = 1, 2, \ldots, k$

• The test statistic

$$H = \frac{12}{n(n + 1)} \sum \frac{T_i^2}{n_i} - 3(n + 1)$$

$H_0$ the $k$ distributions are identical

$H_1$ At least one distribution is different

In other words,

$H_0$ $M_1 = M_2 = M_3$ (The median test scores are equal.)

$H_1$ Not all of the medians are equal.

Significance Level = 0.05

Rejection Region Reject the null hypothesis if $p$-value $\leq 0.05$.

When $H_0$ is true, the test statistic $H$ has an approximate chi-square distribution with $df = k-1$. 

1.9 LIMITATION

The focus of the study is on the impact of supermarket on small retailers in Tirunelveli District, and also consumer preferences, price, quality service and availability etc. But other variables have not been considered in this study. This survey covered only few areas and the effects cannot be generalized for other positions. In Tirunelveli District, the researcher identified the number of supermarkets in urban and semi urban areas. In those countries, the researcher could find few shopping centres and small shops only and it would be safer if more number of supermarkets and small retailers were functioning. The research area is a vast area and researcher could not meet all respondents directly and could not explain each and every question in the questionnaire. Consequently, findings and conclusion drawn out of the subject cannot be extrapolated.

1.10 CHAPTER SCHEME

This research includes five chapters which are described briefly as under

1.10.1 Chapter I- Introduction and Research Design

This chapter deals with introduction of research, statement of the problem, objective of study, hypotheses of study, methodology of study, scope of study, observation and finding of the study and chapter scheme.

1.10.2 Chapter II- Review of Previous Research Studies

In this chapter, I have surveyed and abstracted academic journals, conferences, proceedings, technical reports, books, articles, working papers etc.

1.10.3 Chapter III- Conceptual Framework of Retailing

In this chapter is entitled as “conceptual framework of supermarket and small retailers”. We got through to concept and impact of supermarket on small retailer in
Tirunelveli District. In this chapter explains about the retail market, definition of supermarkets, definition of small retailers, and impact of supermarket on small retailers, growth of the retail market in global level, national level, Tamil Nadu level and Tirunelveli District Level. It also puts forward the recent trends on supermarket and small retailers.

1.10.4 Chapter IV- Data Analysis and Interpretation

In this chapter data analysis were made, which includes, reliability coefficients, Mean, factor Analysis, correlation, regression, Kruskal Wallis test, chi-square test, t-test, Paired Samples Test, Analysis of variance, towards preferred supermarket by respondents, convenient time for shopping in supermarkets and small retailers. In this analysis chapter demographic variable of the respondent were analysed. In addition the attitude of customers and retailers in the study area was analysed in the four parts. First part is shopping behaviour at supermarket, second part is shopping behaviour at small retailers, third part is analysis of impact of supermarkets on small retailers and fourth part is retailers perception on their retail business and consumers. It analyses the customer’s overall satisfaction of the supermarket and small retailers, purchasing practices and behaviour of the buyer towards supermarket and small retailer and their impacts. In summation, this chapter also analyses the impact of supermarket on small retailers in Tirunelveli District. The entire report is presented in five chapters.

1.10.5 Chapter V- Summary of Findings and Conclusion

This chapter provides the findings of the research study. Depends on the findings, conclusions has been drawn and provide better suggestions are given.