CHAPTER 3
RESEARCH METHODOLOGY
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3. Research Methodology

3.1 Introduction

As revealed in the review of literature, presence of a number of factors affect the brand life cycle of tourist attractions. The exogenous factors are not within the control of the promoters of the tourist attractions and hence the scope of the research is limited to the endogenous factors. The study area is limited to the State of Kerala and the scope of the study is limited to major brands. The specific objectives of the study are (i) to indicate the present life cycle stage of tourism in Kerala (ii) to identify the factors influencing the life cycle of the tourist destinations, (iii) to assess the attitude of residents in selected tourism destinations towards tourism development, and (iv) to assess the satisfaction level of tourists in the selected tourist destinations. Since life cycle analysis would require time series data for a long period, only the end period of the study is predetermined and kept at 2007. The primary surveys were conducted in the beginning of 2008.

3.2 Design of the study

The design of the study is framed on the basis of the following tasks that are to be accomplished to meet the objectives:

1) Exploratory research on variables that influence tourism product life cycle

2) Generate a list of indicators / variables that influence the tourism product life cycle from the exploratory research

3) Identify factors that influence the tourism product life cycle from the generated list of variables that are relevant to Kerala
4) Analysis of Kerala tourism with the objective of selecting brands for life cycle analysis

5) Assessment of data requirements and availability, and collection of secondary data

6) Sampling design and collection of primary data

7) Analysis of life cycle of Kerala tourism and selected tourism brands

8) Measurement of identified factors influencing product life cycle with respect to selected brands of tourism products, including satisfaction level of tourists and attitude of resident population

9) Discussion of findings and drawing conclusions

The methodology followed in the study for accomplishing each of the above tasks is explained in the following sections. The relationship of the above tasks in completing the research work is shown in the chart that follows.
“A study of brand life cycle of selected tourism products in Kerala”

- Exploratory research on variables that influence tourism product life cycle
- Generation of a list of variables that influence tourism product life cycle
- Identify factors that influence product life cycle.

- Analysis of Kerala Tourism with the objective of selecting tourism brands for detailed study
- Assessment of data requirements and availability, and collection of secondary data
- Sampling design and collection of primary data
- Time series analysis of tourist arrivals with respect to Kerala and the selected tourism brands
- Measurement of factors influencing product life cycle in the selected sites including tourist satisfaction and attitude of residents
- Discussion of findings and drawing conclusions

Chart: Methodology followed in the study
3.3 Descriptions of the tasks

3.3.1 Exploratory research on Tourism Product Life Cycle

Texts and journal articles were referred to study the product life cycle characteristics in general and tourism products in particular. The researcher has come across product life cycle models conceived in past research works. The debates for and against the use of product life cycle concept were also reviewed. The reviews made are part of Chapter 2 – Review of Literature.

3.3.2 Generate a list of variables that influence the tourism product life cycle

The exploratory research has helped to review various studies that covered the product life cycle of tourist destinations. Some of the studies concentrated on resorts. There were case studies that brought out the stages in the product life cycle. The developments, changes, damages and rejuvenation efforts seen in the studies are listed out and a list of variables are derived from these past studies. The list thus derived from earlier studies is given in Appendix 3.1.

3.3.3 Identify factors that influence tourism product life cycle with particular reference to the tourism brands in Kerala

Since the scope of the present study is limited to endogenous factors only, all the external variables that influence the life cycle are filtered out. There existed still a large number of variables to be considered in the study. Since the list was made from different studies, there were variables in different names but representing the same character. Duplication of same character is also removed. What remained is a list of 49 variables and the next attempt was to bring it down to manageable level by
identifying factors that share common traits. Factor analysis is applied to reduce multiple variables to a lesser number of underlying factors that are being measured by the variables.

The variables were presented in the form of statements for making judgements regarding the relevance with respect to Kerala tourism. Each of the statements is given a rating from 1 to 11, with 1 for the least important variable and 11 for the most important variable, with respect to the tourist destinations in Kerala. Before collecting the observations from the actual groups of judges, the listed statements were read out to a group of research scholars at Rajagiri School of Social Sciences and the faculty members of Kerala Institute of Tourism and Travel Studies (KITTS) to ensure the meaning conveyed to a reader by each of the statements. This has helped to identify statements that required explanations.

Rating on the importance of the statements with respect to destinations in Kerala is given by a set of management students who were knowledgeable on the concept of product life cycle. To minimize judgement error, the statements were printed along with brief descriptions of the underlying variable in each statement. The students were once again refreshed with the concepts of product life cycle, tourism product life cycle and the changes that are observed in the different stages of life cycle. They were also given a brief account of the tourist destinations in Kerala. They were reminded about rating scales and how the statements given in the score sheets are to be rated on the basis of relevance to Kerala tourism. Judgements on the importance of these statements were made by these judges. The score sheet used for this is given in Appendix 3.2.
The thumb rule for application of factor analysis is that the number of observations be four to five times the number of variables. The number of variables in the list was 49 and to employ factor analysis, the sample size required was 245. Actual sample size achieved was 315. The distribution of respondents to judge the values of variables for the purpose of factor analysis were as follows:

Rajagiri College of Social Sciences  –  74
SCMS, Kalamasserry                –  135
Iqbal College, Peringamala        –  39
KITTS, Trivandrum                 –  67

The collected data was subjected to reliability and validity tests. A key feature in any research based upon questionnaires is to what degree is a sample adequate, and the data reliable. Various measures exist. The Kaiser-Meyer-Olkin measure is used to test the sampling adequacy. The survey produced a result of 0.927, which is considered to be very good and acceptable.

The factor analysis carried out, using SPSS, to explore the variables that influence tourism product life cycle yielded results as shown in Table 3.1. Principal Component analysis was used for extracting the factors. The Varimax rotation method was applied. Split analysis was carried to ensure the reliability of the analysis. Cronbach’s alpha coefficients for the two split halves were 0.9123 and 0.916 with 25 variables in the first half and 24 variables in the second half. The analysis identified 11 factors that could explain the 49 variables. All the 11 factors were given names that could represent the variables grouped under it. Each factor is identified as
influencing the product life cycle. The eleven factors identified in the analysis were as follows:

1. Destination experience
2. Quality of resources
3. Attitude of residents
4. Natural ambience of the site
5. Urbanisation
6. Commercial land use
7. Transition from tourism
8. Local participation
9. Occupancy of tourist accommodation
10. Historicity
11. Tourism promotion.

Further focus of the research was on these eleven factors.
Table 3.1: Identified factors that influence tourism product / destination life cycle

<table>
<thead>
<tr>
<th>Factor</th>
<th>Variable influencing tourism product life cycle</th>
<th>Factor Loadings</th>
<th>Eigen values</th>
<th>Variance explained (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td><strong>Destination Experience</strong></td>
<td></td>
<td>7.146</td>
<td>14.583</td>
</tr>
<tr>
<td></td>
<td>Tourist satisfaction</td>
<td>0.763</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Security of visitors</td>
<td>0.724</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Adequacy of infrastructural facilities</td>
<td>0.707</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Percentage of tourists to total capacity of the site</td>
<td>0.652</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Trend in number of tourist arrivals to the site</td>
<td>0.645</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Additional attractions that could be set up / added in the site</td>
<td>0.64</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Seasonal characteristics of the site</td>
<td>0.573</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Influence of pollution level in the site</td>
<td>0.56</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Competing destinations (inside or outside Kerala)</td>
<td>0.537</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Market segments utilizing the site</td>
<td>0.521</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Trend in average tourist expenditure</td>
<td>0.497</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Investments made in the site for tourism development</td>
<td>0.487</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Adaptation level of IT for the benefit of visitors</td>
<td>0.475</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The motifs of the players who promoted the site initially</td>
<td>0.463</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Structure of the economic and productive base</td>
<td>0.454</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Support of resident population</td>
<td>0.453</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Management of elements that threat sustainability</td>
<td>0.388</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Regulatory measures enforced from time to time</td>
<td>0.356</td>
<td></td>
<td></td>
</tr>
<tr>
<td>II</td>
<td><strong>Quality of resources</strong></td>
<td>3.824</td>
<td>7.803</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ratio of tourism staff with post secondary education</td>
<td>0.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ratio of skilled to unskilled workers in tourism</td>
<td>0.699</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of trainings organized for the human resources in the site</td>
<td>0.688</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of small, medium and large entrepreneurs in the destination</td>
<td>0.562</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Liquidity / indebtedness of tourism firms in the site</td>
<td>0.527</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Investment made in hardware, software and human resources</td>
<td>0.429</td>
<td></td>
<td></td>
</tr>
<tr>
<td>III</td>
<td><strong>Attitude of residents</strong></td>
<td>2.73</td>
<td>5.571</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Migration ratio</td>
<td>0.778</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Influence of age composition of the resident population</td>
<td>0.593</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Immigration ratio</td>
<td>0.56</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Share of daily visitors to total visitors to the site</td>
<td>0.516</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Occupational structure of tourism labour force</td>
<td>0.372</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor</td>
<td>Variable influencing tourism product life cycle</td>
<td>Factor Loadings</td>
<td>Eigenvalues</td>
<td>Variance explained (%)</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------------</td>
<td>----------------</td>
<td>-------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>IV</td>
<td>Natural ambience of the site</td>
<td></td>
<td>2.447</td>
<td>4.993</td>
</tr>
<tr>
<td></td>
<td>General architectural design of the buildings / structures in the site</td>
<td>0.687</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The greening programs taken up by the tourism enterprises in the site</td>
<td>0.667</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of heritage monuments in the site</td>
<td>0.568</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Planning history of the site</td>
<td>0.385</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V</td>
<td>Urbanisation</td>
<td></td>
<td>2.385</td>
<td>4.868</td>
</tr>
<tr>
<td></td>
<td>Visitor – resident ratio over the years</td>
<td>0.681</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Traffic to the site</td>
<td>0.505</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Growth of resident population</td>
<td>0.457</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VI</td>
<td>Commercial land use</td>
<td></td>
<td>2.348</td>
<td>4.791</td>
</tr>
<tr>
<td></td>
<td>Share of tourist accommodation in the private sector</td>
<td>0.661</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Area brought under commercial use in the site over the years</td>
<td>0.631</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VII</td>
<td>Transition from tourism</td>
<td></td>
<td>2.095</td>
<td>4.276</td>
</tr>
<tr>
<td></td>
<td>Role of non-governmental organizations</td>
<td>0.637</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Conversion of tourism facilities for other uses</td>
<td>0.599</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rising land prices in the destination</td>
<td>0.516</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VIII</td>
<td>Local participation</td>
<td></td>
<td>1.987</td>
<td>4.055</td>
</tr>
<tr>
<td></td>
<td>Takeover of tourism establishments by resident entrepreneurs</td>
<td>0.643</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Crime rate of the site</td>
<td>0.628</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IX</td>
<td>Occupancy of tourist accommodation</td>
<td></td>
<td>1.626</td>
<td>3.318</td>
</tr>
<tr>
<td></td>
<td>Trend in number of beds available to the tourists</td>
<td>0.607</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Trend in occupancy level of hotels</td>
<td>0.513</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>Historicity</td>
<td></td>
<td>1.573</td>
<td>3.21</td>
</tr>
<tr>
<td></td>
<td>Number of years since tourists started visiting the site</td>
<td>0.689</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Influence of consumer price level in the site</td>
<td>0.362</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XI</td>
<td>Tourism promotion</td>
<td></td>
<td>1.458</td>
<td>2.975</td>
</tr>
<tr>
<td></td>
<td>Advertisement expenditure</td>
<td>0.704</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Percentage of repeat visitors</td>
<td>0.43</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>27.919</td>
<td>60.443</td>
</tr>
</tbody>
</table>
3.3.4 Analysis of Kerala Tourism with the objective of selecting tourism brands for detailed study

Tourism Resorts Kerala Limited (TRKL), under Department of Tourism, Government of Kerala, commissioned a study to assess the market of Vagamon in Kerala (TRKL, 2001). The assessment was made using a sample survey of more than 1000 domestic and international visitors, more than 300 households in their home cities of Mumbai, Chennai and Delhi, and more than 20 leading domestic and international travel operators. The results of the survey included the following:

- Kerala is perceived as a leisure destination
- The primary attractions in Kerala are nature based, with ‘natural beauty and greenery’ as the primary attractive features. The beaches and coastline, and the backwaters are seen as the primary attractive features.
- The most visited destinations in Kerala are beaches (87% of domestic and 80% of international visitors). Backwaters also assume equal importance (78% of international and 60% domestic)

The above revelations give a general background of the preferences of tourists coming to Kerala. The popular tourist destinations in Kerala are marketed by the State as well as other players in the tourism sector. While the State promotes a destination or several destinations in the State as a single product, the other players focus on promoting the facilities or properties owned by the respective players. Information on tourist statistics with respect to some of these destinations is available in the form of published statistics on tourist arrivals by the Department of Tourism (DoT), Government of Kerala. Wherever there was an information gap, attempt was made to
cover it with the information collected from the sites and from the offices of the District Tourism Promotion Councils (DTPC) located in the districts of Kerala.

The assessment of the patronage is made in terms of the number of visitors to each of these destinations. Since the visitors comprise foreign as well as domestic tourists, both the types were included. Since tourism in general follows a seasonal pattern, the statistics collected are presented according to seasons. As far as possible, care is taken to carry out the analysis using information available from the early nineties to the year 2007, so that the selection of tourism brands for detailed study would be based on prominence. Tourist arrivals at the main centres, market performance of top ten countries based on tourist arrivals and the findings of a study carried out for Department of Tourism are made use of for selecting the destinations.

Since the objective of this task is to select destinations for detailed study, only those destinations for which tourist statistics are available are considered. Owing to the nature of the problem selected for research, the study has to be confined to defined areas. While information on most of the prominent destinations is available, a few of the destinations in the northern part of Kerala that have emerged in the near future do not have destination specific tourist statistics. Here too, since the basis of life cycle analysis is time series data on tourist arrivals, these destinations cannot be considered for detailed study.

As per the statistics available, there were eight destinations in the State for which destination wise tourist arrivals were maintained since 2003. Tourist arrivals to these destinations are given in Table 3.2. About 65 to 70% of foreign tourist arrivals and 35 to 40% of domestic tourist arrivals are accounted for by these eight destinations. Among these, Guruvayoor is a pilgrim centre and hence out of the scope of the
present research. The pilgrim centres are destinations of a separate class and need to be addressed separately.

Table 3.2: Tourist arrivals in the main tourist centres in Kerala (in ‘000)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Kochi city</td>
<td>Foreign</td>
<td>52</td>
<td>65</td>
<td>84</td>
<td>94</td>
<td>106</td>
<td>106</td>
<td>119</td>
<td>126</td>
</tr>
<tr>
<td></td>
<td>Domestic</td>
<td>774</td>
<td>738</td>
<td>846</td>
<td>834</td>
<td>878</td>
<td>838</td>
<td>643</td>
<td>600</td>
</tr>
<tr>
<td>2. Kovalam</td>
<td>Foreign</td>
<td>44</td>
<td>30</td>
<td>30</td>
<td>43</td>
<td>46</td>
<td>56</td>
<td>79</td>
<td>121</td>
</tr>
<tr>
<td></td>
<td>Domestic</td>
<td>12</td>
<td>27</td>
<td>37</td>
<td>69</td>
<td>84</td>
<td>79</td>
<td>107</td>
<td>125</td>
</tr>
<tr>
<td>3. Thekkady</td>
<td>Foreign</td>
<td>22</td>
<td>17</td>
<td>16</td>
<td>23</td>
<td>29</td>
<td>27</td>
<td>32</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Domestic</td>
<td>167</td>
<td>199</td>
<td>179</td>
<td>163</td>
<td>91</td>
<td>107</td>
<td>110</td>
<td>103</td>
</tr>
<tr>
<td>4. Munnar</td>
<td>Foreign</td>
<td>8</td>
<td>7</td>
<td>9</td>
<td>11</td>
<td>12</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Domestic</td>
<td>119</td>
<td>112</td>
<td>128</td>
<td>258</td>
<td>282</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Alappuzha</td>
<td>Foreign</td>
<td>12</td>
<td>13</td>
<td>17</td>
<td>26</td>
<td>38</td>
<td>30</td>
<td>36</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>Domestic</td>
<td>128</td>
<td>122</td>
<td>139</td>
<td>172</td>
<td>186</td>
<td>174</td>
<td>179</td>
<td>110</td>
</tr>
<tr>
<td>6. Kumarakom</td>
<td>Foreign</td>
<td>8</td>
<td>9</td>
<td>17</td>
<td>17</td>
<td>21</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Domestic</td>
<td>12</td>
<td>28</td>
<td>30</td>
<td>33</td>
<td>49</td>
<td>35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Guruvayoor</td>
<td>Foreign</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Domestic</td>
<td>1072</td>
<td>1109</td>
<td>965</td>
<td>1061</td>
<td>1117</td>
<td>1218</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Varkala</td>
<td>Foreign</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>12</td>
<td>10</td>
<td></td>
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<tr>
<td></td>
<td>Domestic</td>
<td>5</td>
<td>10</td>
<td>12</td>
<td>13</td>
<td>17</td>
<td>23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>Foreign</td>
<td>130</td>
<td>126</td>
<td>166</td>
<td>204</td>
<td>247</td>
<td>251</td>
<td>313</td>
<td>347</td>
</tr>
<tr>
<td></td>
<td>Domestic</td>
<td>2201</td>
<td>2120</td>
<td>2410</td>
<td>2497</td>
<td>2375</td>
<td>2564</td>
<td>2504</td>
<td>2367</td>
</tr>
<tr>
<td>All Kerala</td>
<td>Foreign</td>
<td>210</td>
<td>209</td>
<td>233</td>
<td>295</td>
<td>346</td>
<td>346</td>
<td>429</td>
<td>516</td>
</tr>
<tr>
<td></td>
<td>Domestic</td>
<td>5013</td>
<td>5240</td>
<td>5568</td>
<td>5871</td>
<td>5972</td>
<td>5946</td>
<td>6272</td>
<td>6643</td>
</tr>
</tbody>
</table>

Source: Tourist Statistics, Various years, Department of Statistics, Government of Kerala

A major study (TCS, 2000) commissioned by Department of Tourism, Government of Kerala identified five destinations as the preferred places in Kerala based on a sample survey of tourists as given in Table 3.3.
Table 3.3: Affinity towards destinations in Kerala as expressed by foreign tourists

<table>
<thead>
<tr>
<th>Tourist Destination</th>
<th>% Affinity (Domestic tourists)</th>
<th>Rank</th>
<th>% Affinity (Foreign tourists)</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kovalam</td>
<td>30.0%</td>
<td>1</td>
<td>18.3%</td>
<td>2</td>
</tr>
<tr>
<td>Thiruvananthapuram</td>
<td>24.9%</td>
<td>2</td>
<td>17.5%</td>
<td>4</td>
</tr>
<tr>
<td>Kochi</td>
<td>18.3%</td>
<td>3</td>
<td>29.4%</td>
<td>1</td>
</tr>
<tr>
<td>Kumarakom/ Alappuzha</td>
<td>12.5%</td>
<td>4</td>
<td>18.0%</td>
<td>3</td>
</tr>
<tr>
<td>Thekkady</td>
<td>12.5%</td>
<td>5</td>
<td>14.2%</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: TCS Study 2000

Market performance of the top countries in the form of arrivals to the main destinations in Kerala is available. The preferred destinations of these tourists are given in Table 3.4. It can be seen that the most preferred destinations in Kerala are Kochi, Kovalam and Thekkady.

From Table 3.3 and Table 3.4, the common destinations preferred by foreign tourists are Kochi, Kovalam and Thekkady. In the case of domestic tourists, the preferred destinations are Kochi, Kovalam, Thekkady, Munnar and Alappuzha (Table 3.2). Hence it can be seen that Kochi, Kovalam and Thekkady are the main attractions in Kerala for a tourist. Kochi has a geographically larger area and offers multiple attractions that include heritage sites, cultural activities, backwaters and beaches. There are other reasons for Kochi recording maximum number of tourist arrivals.
Table 3.4: Preferred destinations of tourists from the top tourist markets of Kerala

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>1</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
</tr>
<tr>
<td>Canada</td>
<td>1</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
</tr>
<tr>
<td>France</td>
<td>1</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Thekkady</td>
<td>Thekkady</td>
<td>Thekkady</td>
<td>Thekkady</td>
<td>Thekkady</td>
<td>Thekkady</td>
<td>Thekkady</td>
</tr>
<tr>
<td>Germany</td>
<td>1</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
</tr>
<tr>
<td>Italy</td>
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<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
</tr>
<tr>
<td></td>
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<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
</tr>
<tr>
<td>Japan</td>
<td>1</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>TVM city</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
</tr>
<tr>
<td>Maldives</td>
<td>1</td>
<td>TVM city</td>
<td>TVM city</td>
<td>TVM city</td>
<td>TVM city</td>
<td>TVM city</td>
<td>TVM city</td>
<td>TVM city</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kochi</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
</tr>
<tr>
<td>Netherlands</td>
<td>1</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Kovalam</td>
<td>Thekkady</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Thekkady</td>
<td>Kovalam</td>
<td>Kovalam</td>
</tr>
<tr>
<td>Spain</td>
<td>1</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Kovalam</td>
<td>Kumarakom</td>
<td>Thekkady</td>
<td>Thekkady</td>
<td>Thekkady</td>
<td>Thekkady</td>
<td>Kovalam</td>
</tr>
<tr>
<td>Sweden</td>
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<td>Kovalam</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Kochi</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
</tr>
<tr>
<td>Switzerland</td>
<td>1</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Thekkady</td>
<td>Kovalam</td>
<td>Kovalam</td>
</tr>
<tr>
<td>UK</td>
<td>1</td>
<td>Kochi</td>
<td>Kovalam</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
</tr>
<tr>
<td></td>
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<td>Kovalam</td>
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<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
</tr>
<tr>
<td>USA</td>
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<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
<td>Kochi</td>
</tr>
<tr>
<td></td>
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<td>Kovalam</td>
<td>Kovalam</td>
<td>TVM city</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
<td>Kovalam</td>
</tr>
</tbody>
</table>

Source: Compiled on the basis of nationality-wise tourist arrivals to destinations

- Department of Tourism, Government of Kerala, collects the statistics on tourist arrivals from the accommodations. The presence of the international airport at Kochi naturally makes Kochi a must-see destination in the travel itinerary of tourists.

- Kochi is also the main link of tourist packages to various attractions in and around Kochi.
The attraction of Kovalam is mainly the beaches. Thekkady is a wild life sanctuary. Hence among the three, Kovalam and Thekkady are selected for detailed study.

**Delineation of the study area**

**Kovalam:** The core tourism area of Kovalam is formed by parts of Thiruvananthapuram Corporation, Venganoor and Vizhinjam Panchayats. Hotels and Ayurvedic resorts have come up in places away from this core area such as Thiruvallom, Vellar, Pachalloor, Azhakulam, Mukkola and Pulinkudi (Committee on Scientific Study of Kovalam, 2002). Tourism services are also available in the city area of Thiruvananthapuram.

The core tourism area is taken as the study area. This area is bound by Thiruvananthapuram – Poovar road in the east, Vizhinjam harbor area on the south and Vellar road on the north. The beach and the sea border the area in the west. This area is formed by Ward 67 of Thiruvananthapuram Corporation, Ward 15 of Venganoor Grama Panchayat, and Wards 1, 2 (part), 19 (part) and 20 (part) of Vizhinjam Grama Panchayat. The entire coastal stretch falls in Vizhinjam Grama Panchayat.

**Thekkady:** Thekkady is part of the town area of Kumily Grama Panchayat. Periyar Tiger Reserve is the attraction for tourists and their accommodation is provided in Kumily. Kumily Grama Panchayat has a total area of 810.77 sq. km. A large portion of the area, 777.54 sq. km, comes under reserve forest (National Transportation Planning and Research Centre, 2004). The Panchayat is divided into 16 wards as per 2001 Census.
The study area is confined to the three wards in the town area of Kumily Grama Panchayat namely, Ward 7 – Kumily, Ward 8 – Rosapookandam, and Ward 9 – Thekkady. The numbers of these wards have been changed recently, but this study has followed the names and numbers that prevailed at the time of Census 2001 to suit the data availability.

Thekkady is marketed as the wildlife destination in Kerala and promises viewing of wild life from close quarters. The major recreational activities available to tourists are boating, trekking, tiger trail (which is protection-oriented adventurous trekking and camping deep inside the tourism zone of the Reserve Forest), elephant ride and watch towers (which are located in the interior of the tourism zone where visitors can spend a night).

The population characteristics of the study areas are given in Table 3.5 and the study areas of Kovalam and Thekkady are shown in Figure 3.1.
Table 3.5: Population characteristics of delineated study areas at Kovalam and Thekkady

<table>
<thead>
<tr>
<th>Destination</th>
<th>Area (ha)</th>
<th>Households</th>
<th>Population</th>
<th>Total workers</th>
<th>Main workers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Male</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Female</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total</td>
</tr>
<tr>
<td><strong>Kovalam</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vizhinjam Panchayat</td>
<td>1262</td>
<td>9273</td>
<td>47170</td>
<td>13993</td>
<td>9285</td>
</tr>
<tr>
<td>Ward 1</td>
<td></td>
<td>518</td>
<td>2253</td>
<td>733</td>
<td>117</td>
</tr>
<tr>
<td>Ward 2</td>
<td></td>
<td>421</td>
<td>2512</td>
<td>604</td>
<td>371</td>
</tr>
<tr>
<td>Ward 19</td>
<td></td>
<td>405</td>
<td>2893</td>
<td>780</td>
<td>758</td>
</tr>
<tr>
<td>Ward 20</td>
<td></td>
<td>519</td>
<td>4005</td>
<td>1101</td>
<td>798</td>
</tr>
<tr>
<td>Study area in Vizhinjam</td>
<td>156</td>
<td>511</td>
<td>2162</td>
<td>688</td>
<td>504</td>
</tr>
<tr>
<td><strong>Venganoor Panchayat</strong></td>
<td>1012</td>
<td>8205</td>
<td>33372</td>
<td>11382</td>
<td>6214</td>
</tr>
<tr>
<td>Ward 15</td>
<td></td>
<td>511</td>
<td>2162</td>
<td>688</td>
<td>504</td>
</tr>
<tr>
<td>Study area in Ward 15</td>
<td>58</td>
<td>511</td>
<td>2162</td>
<td>688</td>
<td>504</td>
</tr>
<tr>
<td><strong>Trivandrum Corporation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ward 67</td>
<td>1896</td>
<td>8086</td>
<td>3743</td>
<td>2256</td>
<td>1289</td>
</tr>
<tr>
<td>Study area in Ward 67</td>
<td>81</td>
<td>3314</td>
<td>1534</td>
<td>925</td>
<td>528</td>
</tr>
<tr>
<td>Kovalam Study area</td>
<td>295</td>
<td>1763</td>
<td>11305</td>
<td>3900</td>
<td>2278</td>
</tr>
<tr>
<td><strong>Thekkady</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kumily Panchayat</td>
<td>79528</td>
<td>8060</td>
<td>34558</td>
<td>15113</td>
<td>8935</td>
</tr>
<tr>
<td>Ward 7 – Kumily</td>
<td>587</td>
<td>2592</td>
<td>926</td>
<td>676</td>
<td>174</td>
</tr>
<tr>
<td>Ward 8 – Rosapookandam</td>
<td>680</td>
<td>2945</td>
<td>1226</td>
<td>825</td>
<td>301</td>
</tr>
<tr>
<td>Ward 9 - Thekkady</td>
<td>491</td>
<td>1998</td>
<td>747</td>
<td>560</td>
<td>177</td>
</tr>
<tr>
<td>Thekkady Study area</td>
<td>198</td>
<td>1758</td>
<td>7535</td>
<td>2899</td>
<td>2061</td>
</tr>
</tbody>
</table>

Sources: Census 2001 and (Committee on Scientific Study of Kovalam, 2002)
3.3.5 Assessment of data requirements and availability, and collection of secondary data

Data requirements for the research are for carrying out the life cycle analysis of the selected destinations and for measuring the factors identified in section 3.3.3. Both primary and secondary data are used to meet the requirements. Primary surveys were conducted to learn more about the destination experience of the tourists and attitude of residents. The secondary information available for quality of resources and occupancy of tourist accommodation were supplemented by a primary survey conducted among the tourist accommodation facilities in the site. Information on rest of the factors was taken from secondary sources.

The tasks carried out, processes followed in the research, data used, sources of data and the tools/instruments used are given in
Table 3.6.

Secondary data that are made use of in the research are from published data and study reports. These include the following:

i. Tourist Statistics published by Department of Tourism, Government of Kerala for various years

ii. Administrative reports of Department of Tourism, Government of Kerala for various years

iii. Statistics from District Tourism Promotion Councils in Kerala

iv. Census 2001

v. Statistics from the concerned Grama Panchayats

vi. Publications of Ministry of Tourism, Government of India

vii. Publications of World Tourism Organization (UNWTO)

viii. Kovalam Tourist Destination - An indepth study on the prospects and problems and suggestions for management (Committee on Scientific Study of Kovalam, 2002)


x. Tourism Vision 2025 (Department of Tourism, Government of Kerala, 2002)

xi. Study on Commercial Establishments at Kovalam (KITTS, 2005)

xii. Traffic Improvement Plan for Kumily Town (National Transportation Planning and Research Centre, 2004)

xiii. Vagamon Hill Retreat - Macro Level Tourism Perspective Plan (TRKL, 2001)


xv. Local Impacts of Tourism Development in Kerala: A study on selected centres (KITTS, 2008)
### Table 3.6: Availability of data for the tasks undertaken in the study

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Task</th>
<th>Process / procedure</th>
<th>Data used</th>
<th>Sources of data</th>
<th>Tools / instruments used</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Exploratory research on tourism product life cycle</td>
<td>Literature survey</td>
<td>From references</td>
<td>Secondary</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Generation of list of variables that influence tourism product life cycle</td>
<td>Literature survey</td>
<td>From references</td>
<td>Secondary</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Identification of factors that influence tourism product life cycle</td>
<td>Survey and factor analysis</td>
<td>List of variables expressed as statements</td>
<td>Primary</td>
<td>Questionnaire / Factor analysis</td>
</tr>
<tr>
<td>4</td>
<td>Analysis of Kerala tourism</td>
<td>Data analysis</td>
<td>Tourist statistics, Studies on Kerala Tourism</td>
<td>Secondary</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Assessment of data requirements</td>
<td>Methodology</td>
<td>Study reports, published statistics, sources quoted in various studies</td>
<td>Secondary</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Sampling design and collection of primary data</td>
<td>Determination of sample size, sampling design, questionnaire design, surveying</td>
<td>Number of households, number of tourists, number of tourist accommodations</td>
<td>Primary</td>
<td>Questionnaires – (i) Survey of tourists, (ii) Survey of residents and (iii) Survey of accommodation, Pilot surveys</td>
</tr>
<tr>
<td>7</td>
<td>Time series analysis</td>
<td>Extracting seasonal variation, trend analysis, model fitting, projections</td>
<td>Time series data</td>
<td>Secondary</td>
<td>Time series analysis, curve fitting (4th degree polynomial fit)</td>
</tr>
<tr>
<td>8</td>
<td>Measurement of factors influencing PLC</td>
<td>Analysis of data collected from primary and secondary sources</td>
<td>Study reports, tourist statistics, data collected for the research</td>
<td>Primary and secondary</td>
<td>Scales, Cluster analysis, GINI indices, percentages</td>
</tr>
<tr>
<td>9</td>
<td>Discussion of findings</td>
<td>Interpretation of findings</td>
<td>Analysis of data</td>
<td>Test statistics, graphic representations</td>
<td></td>
</tr>
</tbody>
</table>
3.3.6 Sampling design and collection of primary data

Besides the exploratory survey conducted as explained in 3.3.2, there were three primary surveys through which data was gathered for the research – survey of tourists, survey of residents and survey of accommodation providers. Survey of tourists was primarily to measure the destination experience at the destinations. Survey of residents was to measure the attitude of the residents towards tourism in their locality. Survey of accommodation providers was mainly to get a fillip of information on the accommodation sector that was required for the research. The measurement errors of the constructs are kept at minimum by including those items that were used in the past by researchers for similar studies as reviewed and reported in this research work. Hence the validity of the scales used is taken care of.

Destination experience of tourists and attitude of resident population are measured using Likert type scales. Hence several items are summed to get a total score. Since each item measures some aspect of the construct and the construct is measured by the entire scale, the item measurements need to be consistent. The reliability of the internal consistency is measured for both the surveys conducted among tourists and residents of the destinations. Cronbach’s alpha is used to measure this internal consistency. A value of 0.6 or above is generally considered as satisfactory internal consistency reliability.

Opinion survey of tourists

As it is clear from the title, the population from which the sample is collected is the tourists who arrived at the destinations – Kovalam and Thekkady. More specifically, the tourists who stayed at the destination constituted the population. The main
construct that is brought out from this survey is the measure for destination experience. Since the scope of the research for this measure is confined to foreign tourists, the population considered for drawing the sample is limited to the foreign tourists who arrived at Kovalam and Thekkady and the sampling unit is the foreign tourist.

February and March were selected to carry out the survey to measure the construct in the peak tourist season. The list of tourist accommodations in the study area was compiled from the District Tourist Promotion Councils at Kovalam and Thekkady and the hotel and restaurant owners’ associations in the respective places. The tourists who stayed in these accommodations in February and March 2007 formed the sampling frame.

**Questionnaire design:** The overall experience of a tourist reflects the satisfaction derived by the visit if his expectations are met and can be seen as a function of the satisfaction with different components that explain the overall experience. Selection of the components will have to be such that it would be easy for a tourist to give a rating of the perceived service or experience for that aspect. A sample of tourists was requested to respond to a questionnaire. A five-point Likert scale was used to measure the degree of satisfaction perceived by the tourist. An exact agreement between the tourist’s opinion and a point in the scale would be difficult and approximations to the nearest point were accepted. The attempt made here is to measure a latent variable. Measurement of a latent variable is possible if there exists a number of manifest variables that give meaning and content to the latent variable. These aspects are taken care of while designing the questionnaire. Before finalizing the questionnaire, the

---

1 Concepts that are not directly measurable are called latent variables and that can be measured directly are called manifest variables.
questions were tested with a group of tourists to ensure that the questions would be interpreted correctly by the sampling units. The questionnaire used for the Opinion Survey of Tourists is given in Appendix 3.3.

**Sample size:** During the peak tourism season in 2006-07, 88515 foreign tourists visited Kovalam and 23788 foreign tourists visited Thekkady. Since the population size is very large, though finite, the sample size is determined using the relationship

\[ n = \frac{z^2 \sigma^2}{e^2} \]

Where,

- \( n \) = size of the sample,
- \( z \) = value of the standard variate at a pre-decided confidence level
- \( \sigma \) = standard deviation of the population estimated on the basis of a trial sample
- \( e \) = acceptable error

The main focus of the opinion survey was to measure the destination experience. The mean value of the population is not known. Hence the maximum value of \( e \) is fixed to be in the range 1 to 2%, which means maximum error permitted will be ± 0.02. At 95% confidence level, the \( z \) value is 1.96.

Trial samples of size 50 each were selected from Kovalam and Thekkady. The destination experience measured for these samples gave a standard deviation of 0.1257834 for Kovalam and 0.0947348 for Thekkady. Using these values, the estimated sample size for Kovalam and Thekkady are 152 and 86 respectively, if the error is limited to 2%. If the acceptable error is brought down to 1%, the sample sizes
would be 608 and 344 for Kovalam and Thekkady respectively. The actual sample size collected was 530 and 295 respectively for Kovalam and Thekkady.

**Sampling adequacy and reliability**: Kaiser-Meyer-Olkin measure of sampling adequacy for Kovalam and Thekkady are 0.697 and 0.627 respectively. The Cronbach's alpha scores are 0.6050 and 0.5699 for Kovalam and Thekkady respectively, which indicate that the scales are reliable. Ideally, the Alpha score of Thekkady should have been 0.6 or above. The reason for the low value of Alpha was due to the responses of the tourists with respect to their rating on the expenses for accommodation and food. A majority of the tourists opted for an option in the middle of the scale, taking advantage of the option that avoids a commitment. It is also possible that the tourists were not in a position to rate the expense of food prepared locally. If these variables are removed, the Alpha score was more than 0.7 for both Kovalam and Thekkady.

**Measurement of residents’ attitude**

The population from which the sample is selected is the residents of the study area. The measure to be brought out in the survey is the attitude of the residents towards development of tourism in their locality. The resident population comprises population in all age groups and dependents. Hence, one household is taken as a sampling unit. The opinion expressed by the head of the household or any other knowledgeable member of the family is taken as the opinion of the family. Here, the measure of the construct is arrived at based on the attitude of the family on 28 aspects.
The surveys of residents were also carried out during February and March 2007. The list of households in the study areas at Kovalam and Thekkady were prepared with the help of the electoral rolls. This list of households was used as the sampling frame.

**Questionnaire design:** Similar to the survey conducted among tourists to measure the destination experience of tourists, the survey of residents also used Likert Scales to measure the attitudes towards tourism. The 28 aspects were given to the residents in the form of statements so that the residents responded to them in a five point scale from totally disagreeing to totally agreeing. The questionnaires were in the local language Malayalam so that the residents could read and understand the statements before making their responses. Though the statements were derived from past research done in this area, a pilot survey was carried out to fine-tune the questionnaire. The questionnaire used for the survey is given in Appendix 3.4.

**Sample size:** The total number of households in the study area at Kovalam and Thekkady were 1763 and 1758 respectively. The focus of the survey is to measure the attitude and as in the case of the Opinion Survey of tourists, the average value for this measure and the variance are not known. The methodology followed in the case of the Opinion Survey of tourists, is followed here also. The maximum error permitted is fixed at ±5. The population size is taken as finite population and the sample size is arrived at using the relationship:

\[
n = \frac{z^2 N \sigma^2}{(N - 1)e^2 + z^2 \sigma^2}
\]

Where,

N= size of population
\( n = \) size of the sample, \\
\( z = \) value of the standard variate at a pre-decided confidence level \\
\( \sigma = \) standard deviation of the population estimated on the basis of a trial sample \\
\( e = \) acceptable error

A trial sample of households of size 50 was selected at random from each of the destinations and the survey was conducted in these households. The standard deviations of the attitude measures of the samples were 0.363813 and 0.307702 for Kovalam and Thekkady respectively. The estimated sample sizes for the two destinations are 171 and 81. The actual number of samples collected for the research was 182 and 139 for Kovalam and Thekkady respectively.

**Sampling adequacy and reliability:** KMO measure for sampling adequacy for Kovalam and Thekkady was 0.692 and 0.636 respectively. Reliability of the survey is measured using Cronbach’s alpha. The alpha score for Kovalam was 0.603, and for Thekkady, the score was 0.595.

Cluster analysis was used to group the attitude variables measured in the survey. Each group is identified by a name, given on the basis of the nature of the attitude variables. The purpose of making the groups was to measure attitude of the residents with respect to these grouped variables.

**Survey of accommodation providers**

Most of the information on accommodation providers was available from secondary sources. The purpose of conducting a survey here was mainly to get first hand
information on (i) development history of the establishment, (ii) employment of
trained manpower resources for the services, (iii) history of occupancy rate during the
peak tourist seasons over the years, (iv) land area utilized for tourist accommodation,
and (v) environment management measures adopted.

Accommodation statistics though available at State level and at major destination
level, the reliability of these is challenged due to its inadequate coverage (Babu,
2008). Beds provided by unclassified or unregistered segments, non-commercial or
supplementary establishments, and friends or relatives, are uncovered in published
statistics. To get the maximum coverage, the survey was conducted in the tourist
accommodations located in the study area. The list of accommodations in the area was
prepared using the information collected from the District Tourism Promotion
Councils and associations of hotels and restaurants at Kovalam and Thekkady.

A questionnaire was prepared with all the required information. This was tested by
administering it to the Managers or other persons of authority in the establishments.
Suitable changes were made and the questionnaire was finalized. A copy of the
questionnaire is given in Appendix 3.5.

There were 76 accommodation establishments in the study area identified at Kovalam
and 91 establishments in the study area at Thekkady. Out of the 91 accommodation
establishments at Thekkady, 50 were home stays. Each of these establishments was
contacted and the questionnaires distributed with a request to provide the information.
Managers of these establishments were contacted more than once and at the end 50
establishments at Kovalam and 41 establishments including 19 home stays, at
Thekkady responded. Some of the returned questionnaires were not complete. Some
of the hoteliers were reluctant to part with information on employment. Some of them
were not willing to divulge any information that could lead to estimation of revenue. This was in spite of modifying the questionnaire prompting the operators to provide only percentage of occupancy levels in tourist seasons. Since the purpose of the survey of accommodations was to get a fillip to the secondary information available from studies and reports, the moderate response from the accommodation providers has not affected the study.

3.3.7 Time series analysis of tourist arrivals with respect to Kerala and the selected tourism brands

Temporal dimension of tourism and the statistical treatment of time based data, could be an exciting direction of future research. (Dann, Nash & Pearce 1988, cited by Oppermann, 1995). In the research study, time series analysis is done for three sets of data – tourist arrivals to Kerala, Kovalam and Thekkady. In practice, it is desirable to use as long a period as possible when a trend is to be determined (Croxton, Cowden, & Klien, 1975). The time series data of month-wise foreign tourist arrivals in Kerala, as published by Department of Tourism, Government of Kerala, is prepared for the years from 1986 to 2006. But the practice of compiling destination-wise statistics on a monthly basis started only since 1996, though annual tourist arrivals to selected destinations was available since 1988. Hence it was necessary to generate the monthly tourist figures for Kovalam and Thekkady since 1988 to get a longer period for the analysis and to compare the destinations with the behaviour of tourist arrivals for Kerala as a whole. This is done by distributing the total tourist arrivals to a destination to the months of the year in the same proportion of tourist distribution observed in the State. This data set is used for the time series analysis. The steps followed for the time series analysis is explained below:
a. De-seasonalizing of time series data

The monthly arrivals are adjusted for calendar variation by taking the number of days in a month as one-twelfth of 365 days of the year. A 12-month centralized moving average is used for de-seasonalizing the time series data. There are two possibilities for a seasonal pattern – either the pattern would remain the same over the period of time or the pattern undergoes changes. It was found that the tourist arrival pattern has undergone changes over the period of time. Hence the seasonal indices are computed taking this into account and these seasonal indices are used to deseasonalize the seasonal variation from the time series data.

b. Identification of trend

The trend is identified using the deseasonalized time series data. A scatter plot of the data is obtained using the SPSS package. The following forms of models were also derived from the package. Here Y is the dependent variable which represents the tourist arrivals, t is the variable representing time, given on a monthly basis, and the ‘b’s are coefficients.

**Forms of models derived from SPSS**

<table>
<thead>
<tr>
<th></th>
<th>Form</th>
<th>Equation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Linear</td>
<td>$Y=b_0+b_1*t$</td>
</tr>
<tr>
<td>2</td>
<td>Logarithmic</td>
<td>$Y=b_0+b_1\cdot\log(t)$</td>
</tr>
<tr>
<td>3</td>
<td>Inverse</td>
<td>$Y=b_0+b_1/t$</td>
</tr>
<tr>
<td>4</td>
<td>Quadratic</td>
<td>$Y=b_0+b_1<em>t+b_2</em>t^2$</td>
</tr>
<tr>
<td>5</td>
<td>Cubic</td>
<td>$Y=b_0+b_1<em>t+b_2</em>t^2+b_3*t^3$</td>
</tr>
</tbody>
</table>
The model that matched the scatter plot and also fitted well with the available data was the Logistic model. Unlike other models, Logistic model assumes an upper limit value (L) for the dependent variable. Croxton and Cowden (1975) gave a method to estimate L. Three periods of time are selected, \( x_0, x_1 \) and \( x_2 \), equidistant from each other, one near the beginning of the period, one in the middle, and one near the end. The number of months from \( x_0 \) to \( x_1 \) has to be the same as the number of months between \( x_1 \) and \( x_2 \). The three selected values through which the fitted curve will pass are the Y values associated with these three time periods, say \( y_0, y_1 \) and \( y_2 \). In order to minimize the effect of a single unusually high or low value, average of three successive months is preferred to estimate \( y_0, y_1 \) and \( y_2 \). Since the tourist arrivals are nearly a geometric progression than an arithmetic progression, geometric mean is preferred to arithmetic mean. Three months at the beginning and three months at the end are taken to estimate \( y_0 \) and \( y_2 \). Geometric mean of the middle three months estimates \( y_2 \). Then L is estimated using the relationship given below:

\[
L = \frac{\{2y_0y_1y_2 - y_1^2(y_0+y_2)\}}{(y_0y_2 - y_1^2)}
\]
But the models given in the SPSS package were not fitting well in the case of Kovalam and Thekkady. Based on advice received from academicians, the software CurveExpert 1.3 was used. It not only gave a better fit, but also gave a ranking of the models according to its suitability for the data. The models that gave the best fit were as follows:

Form of models derived from CurveExpert 1.3

1. Fourth degree polynomial  \( y = a + bt + ct^2 + dt^3 + et^4 \)
2. Exponential  \( y = ae^{bt} \)
3. Gaussian  \( y = a \exp((-b-t^2)/(2c^2)) \)
4. Richards  \( y = a/(1 + \exp(b-ct)^{(1/d)}) \)
5. Quadratic  \( y = a + bt + ct^2 \)
6. Sinusoidal  \( y = a + b \cos(ct + d) \)

The 4th degree polynomial is found to be the best model to represent tourist arrivals for Kerala as a whole, Kovalam and Thekkady. This model is used to project the tourist arrivals for the years up to 2010. Projection for more years is not attempted since these models are best fit for short term projections.

c. Identification of cyclical variation and explanation of irregular variation

The procedure used to identify cyclical variation is the residual method. The cyclical variation is explained by the ratio of the actual value of the variable and the expected value based on the trend curve, expressed in percentage. This method is used only for describing past cyclical variations.
The interplay of a multitude of forces, other than those already eliminated, is largely responsible for the irregular movements which are usually to be seen in the curve of a series adjusted for seasonal variation and trend (Croxton, Cowden, & Klien, 1975). By the use of a short-term moving average, the irregular movements can be smoothened. The irregular movements can be obtained by dividing the cyclical – irregular values by the cyclical values.

Both the cyclical and irregular variations can be measured only for the period upto which tourist arrival statistics are available. Because of the unpredictable nature of cyclical and irregular variation, knowledge of these variations would not help in refining the projections. Hence the result of this part of the analysis is not made use of in this research.

The time series analysis and the projections are used to identify the life cycle stage of the destination. The shape of the curve that best fits the volume of tourist arrivals against time and the trend indicated through the projected tourist arrivals are first hand information about the probable life cycle stage of the destination. The characteristics that are associated with life cycle stages are then discussed to to see whether the characteristics match with the life cycle stage brought out in the time series analysis. The characteristics compared are sales, cost per tourist incurred by government, net foreign exchange earnings, type of customers, market growth and competitors of the destination. This exercise is carried out for Kerala tourism as a whole and for the destinations at Kovalam and Thekkady.
3.3.8 Measurement of factors influencing PLC in the selected sites including tourist satisfaction and attitude of residents

3.3.8.1 Destination experience

Customer satisfaction is considered as one of the most important sources of the competitive advantage of destinations (Fuchs & Weiermair, 2004). Customer satisfaction depends on the performance of the product compared to the expectations of the customer. He will be dissatisfied if the performance of the product falls short of his expectations. If the performance matches the expectation, he will be satisfied and if the performance exceeds his expectations, he will be delighted (Kotler, Bowen, & Makens, 1999). Satisfaction of a tourist is defined as the tourist’s emotional state after experiencing the visit (Baker & Crompton, 2000). Satisfaction can be used as a measure to evaluate the products and services offered at the destination (Valle, Silva, Mendes, & Guerreiro, 2006).

Analysis of consumer satisfaction is considered as a challenge. If it is possible to identify how components of a product or service affect consumer satisfaction, it would be possible to alter the consumer’s experience to maximize satisfaction (Petrick, Morais, & Norman, 2001). The concept of satisfaction is interpreted differently by each individual and most academicians’ definitions compare expectations and experience. Performance – expectation based multifactor structure of customer satisfaction is an approach used in research to measure customer satisfaction. In the three factor structure of customer satisfaction defined by Kano, quality attributes are grouped into three categories – Basic factors, Excitement factors and Performance factors (Fuchs & Weiermair, 2004). Basic factors are minimum factors that cause dissatisfaction if not fulfilled, but do not lead to customer
satisfaction if fulfilled or exceeded. Customers regard basic factors as prerequisites. Excitement factors increase customer satisfaction if delivered, but do not cause dissatisfaction if not delivered. Excitement factors delight the customers. Performance factors lead to satisfaction if performance is high and lead to dissatisfaction if performance is low. The expectations with respect to a destination are built around the product features communicated to him and these could be termed as the basic factors defined above. A clean environment could delight the tourists and could be termed as the excitement factors. The performance factors are the services rendered to a tourist in a destination that includes accommodation, food, transport, shopping facilities and support of guides if required. In similar lines, the destination experience is quantified in this research with the following three components – Tourist Expectations, Tourism Environment and Hospitality.

Quantification of destination experience is carried out on the basis of the opinion of tourists expressed in the survey carried out among the tourists at the destinations. In the study conducted on “Partnership for Sounds” (PfS) visitors in North Carolina, the survey asked the question: how would you rate your overall trip to the site. The visitors responded on a scale of 1 to 10, ten being the best possible trip imaginable and one being the worst possible experience imaginable (Ellis & Vogelsong, 2002). In another study on the satisfaction level of angling experience in New Zealand, the visitors were asked to rate their satisfaction against a list of 12 items that included facilities, services, information, and recreation experience. The study used a five point Likert-type scale ranging from “not at all important” to “extremely important” and “not at all satisfied” to “extremely satisfied”. The visitors were also asked to rate their overall satisfaction with their fishing experience on a scale 1 to 10, with one being the least and ten being the most satisfied (Wickham, Graefe, & Burns, 2002).
Expectations of tourists in this research are measured on the basis of the responses of tourists in a five point Likert Scale to the questions given below:

- Did this place satisfy your expectations? (From ‘very much below expectations’ to ‘exceeded expectations’)
- Will you recommend the destination to your friends / relatives? (From ‘will not recommend’ to ‘very likely to recommend’)
- Will you revisit the destination in the near future? (From ‘will not revisit’ to ‘very likely to revisit’)

The measure of tourism environment is taken from the response of the tourists to the question “How do you rate the cleanliness of Kovalam?”. The response is given in the scale from ‘very poor’ to ‘very good’.

The measure of hospitality is made on the basis of the accommodation and food offered to tourists. Tourists responded to the following questions:

- How do you find the cost of your accommodation? (From ‘very cheap’ to ‘very high’)
- How do you like the food? (From ‘very poor’ to ‘very good’)

The three components that determined the destination experience cannot be viewed as equally important as understood from the definitions of the three factor structure for measuring customer satisfaction. The primary attraction provides the main motivation for selecting a destination. But attributes like quality of accommodation, convenience of travel etc., have strong influence on travel choice (Baud-Bovy & Lawson, 1998). To get a confirmation of this thought, the researcher sought the opinion of tourists at Kovalam during the course of the analysis of the study. They were asked to distribute
a total score of 10 among the three components. Mode of the values given by the
Tourists to each of the component is taken as the weight of that component. The
expectations of tourists weigh over the other two as it is the basic necessity.
Accordingly, a weight of 4 is given to the expectations of tourists against 3 given for
each of the other two components. The overall destination experience is estimated
using these weights.

As the ratings given by the tourists are in ordinal scale, median is taken as the
average. In the scale 1 to 5, the destination experience can be 5 at the most, in which
case, the tourists experience the maximum satisfaction. The ratio of the rating given
by the tourists to the maximum value of 5 is expressed in percentage. These measures
are in the form of an index ranging from 0 to 100. The larger the value, the more
satisfied the tourist is.

3.3.8.2 Quality of resources

Tourism is the largest generator of jobs providing both direct and indirect
employment. For every nine jobs, one job is in tourism (Singh, 1997; Clarer-Corkes,
Molina-Azorin, & Pereira-Moliner, 2006). Work opportunities are available in the
fields of hotels, tours, publicity programmes, travel agencies, cargo handling, guides,
catering and the like. The international tourists look for quality tourism and this can
be provided only through quality manpower in the tourism industry (Singh, 1997).

Quality of resources engaged in tourism services contribute to enrichment of
destination experience. High levels of service quality are likely to reinforce visitors'
intentions of using the service again in the future and to engage in positive word-of-
mouth communication with their family and friends (Tian-Cole, Crompton, &
Tourism education and training are absolutely necessary for securing positive effects of tourism in destinations (Liu & Wall, 2006). Employee training and development are fundamental to remain competitive in the global arena (Singh, 1997). Training and development of staff is related to service quality. Such activities could reinforce certain behaviors and attitudes that contribute to effective service (Yang & Cherry, 2008). Employers use educational attainments as an indication of desirable personal and work attributes (Vijayakumar & Pillai, 2008).

The tourism industry must attract, recruit and retain quality manpower. Education is principle-based and training is hands-on exercise for skill development. Both have equal weightage and neither can be a substitute for the other (Singh, 1997). In a survey conducted among the employees in hotel industry in Kerala, it was found that only 7% of the sample has education level below 10th Standard (Vijayakumar & Pillai, 2008).

Details of employees who have undergone training are collected through the survey of accommodation providers. In the questionnaire given to the accommodation providers, information on the number of employees and the number of employees having undergone some form of formal training for the hospitality industry was collected. The questionnaires were given to all accommodation establishments in the study area. Some of the establishments were not willing to reveal the employment particulars. A total of 42 establishments from the two destinations provided the information. The percentage of trained manpower is taken as the indicator for the quality of resources.

Quality of resources is a quality phenomenon. Either the quality is present or absent. Such a data takes the form of binomial distribution, with $p$ representing the proportion
of quality resources and \( q = 1 - p \), representing the absence of it. This proportion is tested to confirm whether the proportion of quality resources is higher at the destinations. The test statistics used is:

\[
z = \frac{\hat{p} - p}{\sqrt{\frac{p \cdot q}{n}}}
\]

where \( n \) is the sample size.

### 3.3.8.3 Attitude of residents

Residents of destinations that attract tourists hold diverse opinions about tourism development in their community (Mason & Cheyne, 2000). As mentioned in the earlier chapters, one of the most referred studies was that of Doxey, who proposed an Irritation Index that showed the attitude of residents towards tourists when they arrive for the first time and the changes in their attitude when the tourist arrivals to the site go up. Studies have reported heterogeneity of community responses and diversity of residents’ attitude (Mason & Cheyne, 2000). Tourism involves to a great extent some degree of resident – visitor interaction bringing both positive and negative impacts (Ryan & Cooper, 2007).

The attributes used by Chen (2000) and Cooper (2007) and justified by earlier studies given in Appendix 2.1 were modified to suit the local conditions of this study. The discussions made with tourism professionals to ensure the content validity made an observation that Kerala tourism also contributes to the promotion of cultural activities and art forms. Hence one more variable was added to the list of 27 variables with the statement “Tourism encourages cultural activities and art forms”. The variables used for measuring the attitudes are given below:
• Tourism attracts more spending and investment in Kovalam / Thekkady
• Tourism encourages cultural activities and art forms
• The overall benefits of tourism outweigh the negative impacts
• The tourism industry provides many worthwhile employment opportunities for the people in Kovalam / Thekkady
• The development of tourism business will have an impact on the land value.
• Tourism enhances the quality of life of people in Kovalam / Thekkady
• Tourism holds great promise for the people in Kovalam / Thekkady
• Because of tourism, there are more parks and other recreational facilities that local residents can use
• Tourism is one of the brightest spots in the economic future of Kovalam / Thekkady
• The household standard of living is higher because of the money that tourists spend here
• The problem with tourism is that most of the jobs in the tourism industry are low paying
• Tourists add greatly to the traffic problems in Kovalam / Thekkady
• The more the number of tourists who come to Kovalam / Thekkady, the harder it is for the people in the locality
• Tourism disrupts the tranquility
• The environmental impacts resulting from tourism are relatively minor
• Only a small minority of the people in Kovalam / Thekkady benefits economically from tourism
• The local residents are the ones who really suffer from living in an area popular with tourists
• Tourists should be taxed more than citizens for the services they use.
• Most of the money earned from tourism flows out-of-State companies
• Tourists do not pay their fair share for the services communities provide
• Tourism is responsible for too fast a rate of urbanization in Kovalam / Thekkady
• Tourists crowd out local residents in many good hunting and fishing spots
• An increase in tourists in Kovalam / Thekkady will lead to friction between local residents and tourists
• Tourism has increased the number of crime-related problems in Kovalam / Thekkady
• It’s okay to charge tourists more
• Tourists create a burden on the services in Kovalam / Thekkady
• Tourism development in Kovalam / Thekkady needs to be discouraged
• Do you think whether Kovalam / Thekkady has a negative image for tourists?

The main part of the questionnaire asked respondents to indicate their level of agreement with the above series of statements about tourism in their locality. The questionnaire used to measure the attitudes of residents at Kovalam and Thekkady is given in Appendix 3.4. For better understanding, these questionnaires were in the local language, Malayalam, and the statements were suitably modified to address the residents of Kovalam and Thekkady individually.

Likert scale is used to rate the attitude in a five point scale ranging from ‘strongly disagree’ to ‘strongly agree’. Summative score is used to measure the attitude in each group. Few of the variables measured under the groups are reversal items and the scores are treated accordingly for arriving at the attitude score.

The analysis is carried out by grouping the attitude variables into three using cluster analysis and further classifying the residents into three groups based on the interaction level of the residents with the tourists. The variable groupings gave three groups – satisfiers, repellants and disappointers. The ‘satisfiers’ are the group of variables that reflect the positive impacts of tourism development. The ‘repellants’ are the group of variables that reflect the negative impact of the tourism development. Besides these two, another group was formed with variables that could not meet the expectations of the residents. This group of variables comes under ‘disappointers’.
As brought out in the literature review, this research also has classified the residents into three groups depending on the level of interaction with the tourists. The residents are grouped into (a) residents having no interaction with tourists, (b) residents having some interaction with tourists and (c) residents having high interaction with tourists. Attitude of these groups are measured separately.

As a measure of the factor reflecting the attitude of residents, index values are brought out that reflect the attitude towards tourism development.

3.3.8.4 Natural ambience of the site

According to the American Heritage Dictionary of the English Language, ambience is “the special atmosphere or mood created by a particular environment” (The American Heritage® Dictionary of the English Language, Retrieved October 08, 2008). Ambience, whether related to work place or outside, is a commonly used term in tourism. Troye and Heide (1987) identified ambience as an essential variable for explaining customer satisfaction among hotel guests (cited by Heide, Laerdal, & Gronhaug, 2007). The concept of ambience is but ambiguous and often conveys multiple meanings. Ambience is used more colloquially to describe the quality of surroundings and it contains elements of the environment. Ambience is viewed as created by the interaction between individuals and their environment. Various studies have brought out three factors that are important for creating the desired ambience – atmospheric factors, social factors and design factors (Heide, Laerdal, & Gronhaug, 2007). Empirical research on ambience is however limited in the context of hospitality management.
The special atmosphere relevant here is the natural ambience of the destinations that suits tourism. The air quality, noise level, and the natural settings contribute to the ambience that attracts tourists. A detailed study of Kovalam (Committee on Scientific Study of Kovalam, 2002) and another one for Thekkady (Equations, 2002) are two sources available. Other than these, no historic data is available to explain the natural ambience of the sites. One source of measuring the ambience is from the opinion of tourists. The primary survey conducted among tourists sought the opinion of tourists on the current condition and the attraction characteristics of the destinations. The tourists were given the following five choices to judge the current condition of the destination:

- Coming down
- Steady
- Getting a new life
- Growing
- No opinion

All these resembled the life cycle stages and reflect the ambience of the site as perceived by the tourists. With the scores 1 for “Coming down”, 2 for “Steady”, 3 for “No opinion”, 4 for “getting a new life” and 5 for “Growing”, the opinion is expressed in a rating scale from 1 to 5 for the ambience quality.

The attraction characteristics are also assessed from the point of view of tourists by giving the choices 1 – Out of date; 2 – New; 3 – Mix of old and new; and 4 – No opinion. In a way, this reflects the unique characteristics of the site, if any. If a majority holds the opinion that the destination has “New” attraction characteristics, the site has the ambience to give the tourists an experience not matched by many of the other competing destinations.
The architectural styles of the buildings in the site also contribute to the natural ambience. This information on the accommodations available was collected from the accommodation providers in the destinations.

An alternative measure of ambience is given by considering the tourist pressure on environment. According to World Tourism Organisation (UNWTO), carrying capacity of a destination is defined as the level at which the number of visitors can be maintained without damages to the surrounding physical environment and without generating socio-cultural and economic problems to the community. The carrying capacity maintains the balance between conservation and development. Intensity of use (visitors per hectare) is a measure used to quantify the carrying capacity (Baud-Bovy & Lawson, 1998). This is measured as the density of tourists on suitable land per day in a peak period.

In the case of Kovalam and Thekkady, the study areas have tourism areas as well as residential areas. Hence it is necessary to take out the ‘suitable land’ for computing the pressure of tourists. A conceptual model for land use desirability applied for Kovalam gives the land use allocation as follows (Committee on Scientific Study of Kovalam, 2002):

Residential – 30%, Agriculture/vegetation – 30%, Public utilities and government establishments – 10%, Tourism development – 20%, and Vacant land – 10%.

Thus out of the total area, the desired area for tourism development is 20% in a place like Kovalam. In the absence of a similar allocation for tourism development in mountain areas, the same percentage of area is applied for Thekkady also. Thus,
suitable area for measuring the density of tourists is taken as 20% of the study area identified for Kovalam and Thekkady. Here, the density is calculated as follows:

\[
\text{Density} = \frac{(\text{Number of tourists in January} \times \text{Average number of days in destination})}{\text{Area of suitable land in hectare}} / 31
\]

Average number of days in the destination is taken from the TCS study (TCS, 2000).

Vulnerability of the pressure of tourists can be evaluated only if the observed tourist pressure can be compared to a desirable density. Standards are cited by World Tourism Organization (UNWTO) with respect to resort density, beach capacity and tourist facilities (Committee on Scientific Study of Kovalam, 2002). As per the standards, 20 beds per hectare is the desired resort density and 15 square metres per person is the minimum area required to work out the beach capacity. Planning standards for tourist resorts and recreation complexes are also available (Baud-Bovy & Lawson, 1998). Average requirement of land per bed for traditional resort hotels is 15 to 30 square metres. Standards for commercial holiday villages in coastal areas is 13 to 17 square metres per bed and in mountain areas, the standard is 16 to 21 square metres. In the absence of a standard to define the desirable density of a tourist destination, the above information is made use of for defining the desirable density of tourists at the destinations studied. Here, Kovalam is a sea side destination and Thekkady is a destination in the mountain area. The desirable densities taken are 15 square metres and 20 square metres per tourist in a day respectively for Kovalam and Thekkady. This works out to 67 tourists per hectare in a day at Kovalam and 50 tourists per hectare in a day at Thekkady.

The tourist densities at the destinations take into account domestic as well as foreign tourists. The ratio of the observed density to the desired density is taken as the
ambience index that reflects the pressure of tourists on the suitable land at the destinations. This ambience is the measure of natural ambience of the sites.

3.3.8.5 Urbanisation

As more and more visitors come to a destination, a trend towards urbanization is set and the destination moves towards the final stages in the life cycle. As per the Census of India definition of “urban”, there would be a shift in the primary activity of the area. The economic activities in rural area will be predominantly confined to the primary sector. Urbanisation of a tourist destination will tend to lose the rural characteristics with the growth of more and more commercial establishments. Indicators like visitor-resident ratio, growth of resident population and traffic problems faced by the residents due to the growth of tourism are considered in some studies to measure the urbanization factor of the selected destinations (Getz, 1992; Manente & Celotto, 2004). The attitude of residents towards the traffic problems generated due to tourism was recorded in the survey of residents. If majority of the residents does not agree with the statement – “Tourists add greatly to the traffic problems” in the area – it could be inferred that urbanization is not yet a problem for the destination.

Another alternative measure is the percentage of male working population employed in the primary sector. One of the conditions adopted for categorizing urban area by Census of India is by making use of the occupational characteristics of the male working population. In Census of India 2001, the definition for urban area was given as follows:
a. All places with Municipality, Corporation, Cantonment Board or notified Town Area Committee etc.

b. A place satisfying the following three criteria simultaneously:
   i. A minimum population of 5000
   ii. At least 75% of the male working population engaged in non-agricultural pursuits, and
   iii. A density of population of at least 400 persons per sq.km.

To work out the proportion of male working population referred above against b(ii), the data relating to main workers were taken into account. Adopting b(ii) for measuring Urbanisation, the threshold level would be 75% and the rural characteristics of the destination are taken as undisturbed upto the threshold level.

3.3.8.6 Commercial land use

An increase in tourism activities tends to increase the share of land under commercial land use. The private sector investment also will go up, like the establishment of tourist accommodations. As there is no direct representation of these variables available, the visitor – resident ratio over the years is taken as the measure of this factor. This is similar to the “Index of Tourism Intensity” discussed by Babu (Babu, 2008). Both the foreign and domestic tourists are taken into account to get the number of visitors to the destination. The studies reviewed suggest that visitors do not exceed the residents. But the visitors arrive round the year, stay at the destination and leave. Hence it is more appropriate to take the ratio for a day in the month of January, the peak month in which the arrivals are maximum.
Here, the ratio is worked out for the residents of the core tourism area. Number of visitors, however is for the destinations. Since the central attractions are in the core tourism area, all tourists are assumed to visit the attractions in the core area and consume the facilities, similar to the vicious circle theory discussed by Russo (Russo, 2002). The ratio is desired not to exceed one.

3.3.8.7 Transition from tourism

Once a destination starts attracting lesser and lesser number of tourists year after year, a transition from tourism indicating the decline of tourism in the destination becomes visible (Kim, 2002). Tourism-related activities slow down and new uses are found with the existing tourism resources. GINI index is used to explain the present status of the selected destinations. GINI index is a measure showing the inequality in income distribution. Low values of GINI indices indicate more equitable income distribution and as the values go up, there is more and more unequal distribution. Similar to income distribution, the seasonal concentration of tourists can be represented using GINI index (Manente & Celotto, 2004). When the index value is high, the seasonal concentration is high which means the risk of decline of the destination is high. A quadratic fit in the form $y=a+bx+cx^2$ represent the Lorenz curve for each year, constructed using the monthly tourist arrival data. The GINI indices are computed as described below. In Step 5, the area under the Lorenz curve is calculated using the formula $\int_0^1 (a + bx + cx^2)dx$
3.3.8.8 Local participation

The development stage of the life cycle of the tourism product is the time when investments are made by outsiders and local population starts losing their control (Butler, 2004). Imported labour and auxiliary facilities and services become necessary for the growing tourism industry. Support for tourism decreases as resident control over development decreases (Ryan & Cooper, 2007). The Berlin Declaration (1997)
made a strong normative point by suggesting that tourism should benefit the local communities, strengthen the local economy, employ the local workforce, and wherever ecologically sustainable, use local materials, local agricultural products, and traditional skills (Choi & Sirakaya, 2005). The extent of local participation at the destinations is extracted from the survey of residents conducted at the destinations. Percentage of households that are benefitted from tourism is obtained from the survey. This percentage is taken as the local participation rate.

3.3.8.9 Occupancy of tourist accommodation

The capacity of a destination is also determined by the number of beds available in the site (Getz, 1992; Manente & Celotto, 2004). The occupancy of these accommodations is identified as a factor that influences the life cycle. The occupancy rates of accommodation are collected through the primary survey conducted among the accommodation providers. The occupancy rates during the tourist seasons are taken as the measure of the factor.

3.3.8.10 Historicity

Historicity can be termed as the acceptance of the sites as tourist destinations since a long period. One representation of historicity is the number of years since the sites have been attracting tourists. In one way or the other, both Kovalam and Thekkady are attracting tourists since a long period. While tourism in Thekkady can be said to have started since 1934 with the formation of Nellikkampetty Game Sanctuary, tourism in Kovalam can be said to have begun when the Maharaja of Travancore built his summer retreat at Kovalam in 1930. Often the introductory stage of a destination cannot be traced. In the case of the selected destinations in the present study, the
introductory stage is counted from the years mentioned above. It is possible that both
the places attracted leisure travellers even before, but went unnoticed.

A demand-generated explanation of the life cycle is available in the literature
surveyed (Lundtrop & Wanhill, 2001). When a destination D is in the evolutionary
process, it will have no image of a resort and only very few tourists visit D. When the
development begins, the “explorer” tourists appreciate the qualities of D. To discover
an area as a destination, knowledge of the place must spread outwards, may be
through active marketing or by word of mouth. There will then be a wider market
with knowledge of D that defines the potential market M. At time t, if $M_t$ persons
have knowledge about D, there will be $(M-M_t)$ persons yet to hear about D. When t
tends to $\infty$, $M_t$ tends to M and when this situation is reached, market penetration of D
is complete. Initially, $M_t$ rises slowly, but as $M_t$ increases, knowledge of D is
dispersed rapidly as the pool of tourists to D expands. “By the time knowledge of D is
widespread, there will be only a few people receiving the message for the first time
and so the increase slows down, and finally stops when $M_t$ approaches M
asymptotically” (Lundtrop & Wanhill, 2001, p. 951).

Manjula Chaudhary studied the image of India as a tourist destination among foreign
tourists. India’s image was that of a destination with rich cultural heritage and art
forms. According to the study, more than half the tourists (57.4%) received
information about India from their ‘friends and relatives’ (Chaudhary, 2000).

Arguing in the same lines, as a destination grows, more and more tourists come to
know about the destination and there will be less dependence on promotion materials
to disseminate information to the target market. The word of mouth would take more
prominence to spread knowledge about the destination. The measure of historicity is
hence taken as the percentage of tourists who receive information about the
destination from friends or relatives.

3.3.8.11 Tourism promotion

It is important that the tourism sector effectively communicate their tourism programs
and services to their target markets. Tourism is primarily a service-based industry, and
the main primary products are recreational experiences and hospitality. Tourism and
leisure products are intangible since a tourist has nothing to examine before hand or to
take away afterwards. A tourism product is also perishable since it cannot be stored
by the tourist for future use (Morgan & Pritchard, 2000). It is difficult for potential
tourists to evaluate and compare recreational experiences of competing destinations.
Tourism is associated with travel since the customer must travel to the product. Other
components associated with tourism are accommodations, food and beverage
services, shops, entertainment, aesthetics and special events. Hence, the tourism
product has to be attractive and the associated components have to be encouraging.
This complex nature of the overall package a tourist would seek makes tourism
promotion a task that tourism related businesses, agencies, and organizations need to
work on together.

Tourism promotion is intended to provide the target market enough information to
help them make a travel decision. Symbolic expectations are established
promotionally through words, pictures, sounds etc. Thus advertising constructs an
experience of the product literally in the imagination of a tourist (Morgan & Pritchard,
2000). For example, place image makers use slogans that embody an overall vision of
the place (Kotler, Haider, & Rein, 1993). Like the slogan “God’s Own Country” used
by Kerala, a few other examples are given below:
Spain                      Everything under the sun
Pennsylvania               America starts here
Hershey, Pennsylvania      The Sweetest place on earth
Detroit, Michigan          The Renaissance city
Boston, Massachusetts      The Bicentennial city
Quebec                     It feels so different
Aruba                      Our only business is You

This marketing strategy needs the support of funding for implementation. Tourism promotion by Government of Kerala is with the objective of attracting tourists to the various tourism products in the State. Promoting associated components like accommodation and shops in a destination, does not come under the purview of the Government. But the marketing budget of Government of Kerala gives a clear picture of the tourism promotion efforts in Kerala. Annual tourism marketing budget is analysed here to measure the tourism promotion factor.

The tourism promotional expenses are available only at the State level. Hence estimates are used to represent the expenses at destination level. The following relationships are used to arrive at these estimates:

\[\text{Estimated promotional expense for the destination} = \text{Average promotional expense per foreign tourist} \times \text{Number of foreign tourist arrivals at the destination}\]
Estimated foreign exchange earned from the destination

= Average foreign exchange revenue per foreign tourist

× Number of foreign tourist arrivals at the destination

× Proportion of days spent at the destination out of the total in the State

From the above, the percentage of promotional expense out of the total revenue is calculated for the selected destinations.

3.3.9 Discussion of findings and drawing conclusions

The research hypotheses stated in Chapter 1 are discussed with the help of statistical tests. The discussion of findings is carried out with the objectives set for this research in mind. The life cycle of Kerala tourism as the principal product and life cycles of the selected destinations as the tourism brands are discussed. The eleven factors identified are measured. A model for assessing the destination mix incorporating the identified factors is proposed followed by its application in the case of the selected destinations in this study. A visual model with the values of the factors in the destination mix is developed. Using the weights of the influencing factors, destination scores are suggested that could reflect the health of the destination and thus the stage of a life cycle.