CHAPTER III

3. RESEARCH METHODOLOGY

3.1. INTRODUCTION

Community-based tourism (hereafter referred to as CBT), is often recognized as a perfect example of Sustainable tourism development. The reason for this is mainly that local community participation in the development and practice of these projects is supposed to be high, and that the whole community benefits from the projects. This study sets out to explore in what way the community members are involved in CBT projects, both at the individual and the community level. While CBT projects in general imply high local involvement in tourism planning and development, this study does not take that as a given and explores in what ways individuals, and the community as a whole, participates. The main question of the research is ‘How does the type of local participation in community-based tourism projects influence the satisfaction of the local population with the outcomes of tourism development?’ It is expected that the more locals participate in CBT projects, the more favorable their attitudes towards tourism in their area they will be. The purpose of this chapter is to describe the research design and the research methods used in this thesis. The chapter starts from roughly describing the research design and the preliminary study of community tourism.

3.2. RESEARCH DESIGN

A research design is a systematic plan to study a scientific problem. The design of a study defines the study type (descriptive, correlation, semi-experimental, experimental, review, meta-analytic) and sub-type (e.g., descriptive-longitudinal case study), research question, hypotheses, variables, experimental, and, if applicable, data collection methods and a statistical analysis plan. The essentials of action research design follow a characteristic cycle whereby initially an exploratory stance is adopted, where an understanding of a problem is developed and plans are made for some form of interventionary strategy. Then the intervention is carried out (the "action" in Action Research) during which time, pertinent observations are collected in various forms. The new interventional strategies are carried out, and the cyclic process repeats, continuing until a sufficient understanding of (or implementable solution for) the
problem is achieved. The protocol is iterative or cyclical in nature and is intended to foster deeper understanding of a given situation, starting with conceptualizing and particularizing the problem and moving through several interventions and evaluations. For the collection of data, the study utilized a field survey research method. The questionnaire was used as an instrument for collecting data.

3.3. RESEARCH FRAMEWORK

The Research Framework outlines a process of assessing evidence that asks questions related to important aspects of interpreting research findings. The Research Framework provides a sound methodology for reviewing practices to determine whether or not these practices can be considered “best practices” (1) are evidence-based, (2) meet a meaningful threshold of effectiveness, (3) are generalizable, and (4) provide actionable information to help practitioners implement practices.

3.4. RESEARCH GAP

1. To find out the category of tourists visiting the selected districts
2. To find out the role played by communities in tourism
3. To find out whether community tourism is effective or not
4. Qualities of community leaders in promoting tourism
5. To find out types of tourism activity they are involved in
6. Benefits to communities from community tourism
7. Problems faced by communities in promoting tourism
8. Role of government in promoting community tourism
9. Various programmes to create awareness for protecting natural resources
10. Importance of Environment protection and waste disposal
11. Community contributions to make their land more attractive and promote good neighbor relations
3.5. RESEARCH PROBLEM

Research design constitutes the blue-print for the collection, measurement and analysis of data; hence it is the conceptual frame by which the research is to be carried out. The present chapter describes the methodology of this research with objectives and hypothesis. It explains about pilot study, sampling process, survey methods, data collection instruments, procedures and tests for data analysis as well. Initially, a literature survey has been conducted in the area for obtaining a comprehensive view of earlier studies in the particular subject, also for determining important variables related to it. Moreover, it helps to develop the theoretical framework. The literature from the published reports, books, and articles, full text from national and international journals were the major secondary sources of data. Bibliographical data bases, abstracts, documents from various websites were also utilized. Thus the literature survey helps to develop a framework for research questions designed for the study.

3.6. OBJECTIVES

1. To find out the awareness of commonality (ies) within a community as a basis of cooperation.
2. To find out whether the community itself is to be more directly involved in tourism, entrepreneurship, conservation and development of self.
3. To find out the employment and self-employment opportunities for the poor and disadvantaged section of the community by involving them directly in tourism services.
4. To find out whether there is any assistance from the government and public sources for the promotion of responsible tourism.
5. To find out the community awareness about environmental awareness, conservation and sustainable use of natural resources in Ernakulam, Kottayam & Thrissur Districts.

3.7. DEVELOPMENT OF HYPOTHESIS

Based on these objectives, formulated hypothesis are as follows:

1) Community tourism is playing a major role in the development of tourism in these 3 districts
2) Communities are getting employment opportunities from Tourism Industry
3) Communities play a vital role in conservation and sustainable use of natural resources
4) Religious authorities are ready to cooperate with community tourism

3.8. VARIABLES SELECTED FOR THE STUDY

3.8.1. DEPENDENT VARIABLES

3.8.1.1. Age,
3.8.1.1. District
3.8.1.1. Gender
3.8.1.1. Community
3.8.1.1. Tourism Category

3.9.1. INDEPENDENT VARIABLES

3.9.1.1. The awareness of commonality
3.9.1.2. Community awareness
3.9.1.3. Responsible tourism
3.9.1.4. Employment and self-employment opportunities
3.9.1.5. Community itself is to be more directly involved in tourism, entrepreneurship, Conservation and development of self.

3.10. QUESTIONNAIRE DEVELOPMENT

A questionnaire has been used as an instrument for collecting the research data. It is the best method in a survey, when the researcher is familiar with the variables needed to be measured in a big and dispersed sample size (Mischkind, 1986). In the beginning, a clear-cut goal is the most essential step in designing a questionnaire and it involves the planning before undertaking the project. We have to look into important issues to be covered and ensure that continuity is maintained. In a newly designed questionnaire it is very important to test the developed instruments for the consistency and viability (Saane et.al, 2003). Thus, a questionnaire has to satisfy the scale refinement and validation.
3.11. RELIABILITY

An assessment of the statistical reliability is necessary before any further validation analysis. Reliability refers to degree of dependability or consistency of a scale. Unreliable scale will lack consistency of measuring the same item to the extent. Four high quality methods for measuring reliability are Test-retest technique, multiple forms, inter-rater, Split half reliability. Now a day, particularly for field survey, internal consistency is estimated by using Cronbach’s alpha. An alpha value of 0.70 or above is considered to be criterion for demonstrating strong internal consistency, alpha value of 0.60 or above is considered to be significant (Cronbach and Meehl, 1994).

3.12. DIFFERENT APPROACHES TO SCALE REFINEMENT AND VALIDATION

Validity is the most critical evaluation and indicates the degree to which instrument measures, what it is believed to measure. It can also be considered as utility, or the extent to which, differences found with a measuring instrument reflects the true differences among these to be tested (Koeske, 1994). Empirically validated scales can be used directly in the field for different programmes. A scale for a construct is useful for application by different researchers in different studies only if it is statistically reliable and valid. Content validity, construct validity and face validity are the major types of validity (Berelson, 1952).

3.12.1. CONTENT VALIDITY

Content validity is a non statistical type of validity that involves “systematic examination of the test content to determine whether it covers a representative sample of the behavior domain to be measured” or the extent to which a measuring instrument provides adequate coverage of the topic understudy. If the instrument contains a representative sample of the universe, the content validity is good; its determination is mainly judgmental and intuitive (Shadish et.al, 2002). It can also be determined by using a panel of persons who shall judge how well the measuring instruments meet the standard, but there is no numerical way to express it. Accordingly, the researcher consulted various experts and academic professionals in particular field for this purpose and hence ensured that the questionnaire so prepared for the evaluation of the Community Tourism is measured with sufficient content validity.
3.12.2. FACE VALIDITY

Face validity is an estimate, whether the test appears to measure a certain criterion, but it does not guarantee that the test actually measures phenomena in that domain and is very close to content validity. The content validity depends upon a theoretical basis for assuming a test that it is assessing all domains of a certain criterion, meanwhile face validity relates to whether the test appears to be a good measure (Haynes et.al., 1995). This judgment is made on the face of the test, thus it can also be judged by the experts in the field.

3.12.3. CONVERGENT VALIDITY

(Mischkind, 1986), Convergent validity refers to the degree to which a measure is correlated with other measures that is theoretically predicted with and one of the approaches to the construct validity. Otherwise, it is estimated by comparing it to the measure of the same concept developed through other methods to assess how well the items are together. This involves empirical and theoretical support for the interpretation of the construct (Bagozzi et.al., 1991). Constructs are theoretical or unobserved (e.g. latent variables or factors). Each item in the scale is treated as different approach to measure the construct. Accordingly, by using CFA (confirmatory factor analysis) each item in the scale is checked with the help of coefficient called bentler-bonett fit index (NNFI or TLI). A scale with TLI (Tucker-Lewis index) value of 0.9 or above is an indication of strong convergent validity. It has been observed that TLI values of each construct as well as overall TLI values are more than 0.90 and this indicates strong convergent validity of the instrument. (Siebert and Siebert, 2005).

3.13. PILOT STUDY

A pilot study was conducted for testing the appropriateness of the research questions and methods adopted. The pilot study not only helps in selecting the appropriate data collection strategy but also helps to check whether random sampling was appropriate for the sampling technique. In addition, the significance about the questionnaire is also tested through the pilot study.

The pilot study was conducted with a pre designed questionnaire to 20 selected members from each of the district, altogether consists of 60 respondents. On the basis of findings from the pilot study, the questionnaire is further refined and this
refined questionnaire was used for the final data collection. The design of the questionnaire was carefully done keeping in mind with the variables under study. The key areas to be measured was identified and grouped under each heading. The below table shows the variables under the study and the items used to measure the variables.

<table>
<thead>
<tr>
<th>Variable name</th>
<th>N of Items</th>
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<tr>
<td>Awareness of commonality</td>
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<tr>
<td>Community involvement in tourism, entrepreneurship, etc.</td>
<td>6</td>
</tr>
<tr>
<td>Employment and self-employment opportunities</td>
<td>6</td>
</tr>
<tr>
<td>Assistance from govt and public sources</td>
<td>4</td>
</tr>
<tr>
<td>Community awareness</td>
<td>3</td>
</tr>
</tbody>
</table>

*Source: Field survey*

The questionnaire was self developed in consultation with the supervisor; it was closed in form, made on the basis of 5 point Likert scale ranging from (Strongly Disagree, Disagree, No opinion, Agree and Strongly Agree), as the model of rating. Summated Scales or Likert type scales takes less time to construct and can be easily used in respondent-centered and stimulus-centered opinion research studies like this (Edwards and Kenney, 1946). Demographic questions were included in the beginning of the questionnaire, which is followed by wide-ranging points to the above mentioned variables. (The questionnaire information sheet is presented in Appendix).

3.14. SURVEY

The study has been done from a large sample of respondents from different community from three districts of Kerala, it is essentially cross-sectional. Moreover, the variables that exist were selected, observed, recorded, and analysed. So, survey method is the best approach for a quantitative research, with the help of a structured questionnaire. It helps to understand the possible relationships between the data and the unknowns in the universe (Miller, 1978).

3.15. DATA AND SAMPLE

Research is a scientific Investigation by means of logical and systematic methods to discover new facts or old facts, and analyse their sequences,
interrelationships, and natural terms which govern them. Descriptive research will be used in this study. Out of the population of Ernakulam, Thrissur & Kottayam district a stratified random sampling will be applied for this study. This selection method is good for achieving greater degree representatives that is, decreasing the probable sampling error.

3.16. UNIVERSE AND SAMPLE SIZE

The universe the residents of the selected three districts of Kerala namely Ernakulam, Kottayam & Thrissur. (Source: Census India 2011) Total population in Ernakulam, Kottayam & Thrissur Districts as per Census India 2011 report are Ernakulam: 3279860, Thrissur: 3110327, Kottayam: 1979384. Minor Communities: Jains 4528, Sikhs: 2762, Buddhist: 2027, Jews: 75.

For the purpose of the study it’s been divided into Different strata’s. (Major Community- Hindu, Muslim, Christian, Minor communities such as, the Buddhists, the Jains, the Sikhs, and the Jews also form part of the cosmopolitan population, Major /Minor Communities in Ernakulam, Kottayam & Thrissur:
Major: 30 in each district (30+30+30) =90*3= 270 (Hindu, Christian, Muslim)
Minor: 5 in each District: (5+5+5+5) =20*3=60 (Buddhists, Jains, Sikhs, Jews)
Total sample =330

3.16.1. JUSTIFICATION FOR SELECTING THE SAMPLE

The ever increasing demand for research has created a need for an efficient method of determining the sample size needed to be representative of a given population. No calculations are needed to use Table 3.2. For example, one may wish to know the sample size required to be representative of the opinions of 9000 high school teachers relative to merit pay increases. To obtain the required sample size enter Table 1 at N = 9000. The sample size representative of the teachers in this example is 368. Table 3.2 is applicable to any defined population. There are three methods to select a sample 1) previous research, 2) By using Formula and 3) By using a standard table. In
this study population is selected with the help of standard table Krejcie & Morgan which is given in table 3.2. The sample selected for the study is 384 but after observation & pilot study 54 observation were reduced. (7 communities were selected Total 384/7=54). So Sample selected for the study is 330.

**Table.3.2. Determining sample size from a given Population**

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</table>

N-Population Size   S–Sample Size   (Source: Krejcie & Morgan 1970)
3.17. SAMPLING PROCEDURE

The validity and accuracy of final judgment is most crucial and depends heavily on the extent to which data collected in the first place. The quality of data will greatly affect the conditions and hence very much importance must be given to this process and every possible precaution should be taken to ensure accuracy while collecting the data. One of the major problems in this path is sample size justification. Sample size calculation is concerned with how much data we require to make a correct decision on a particular research. If more the data, then the decision will be more accurate and there will be less error of the parameter estimate. This doesn’t necessarily mean that more is always best in sample size calculation (Mac Callum et.al., 1996). As a result, in the present study the researcher calculated the sample size using the Krejcie & Morgan table and it gives a sample of 250 or more from is adequate for the study.

3.18. DATA PREPARATION FOR ANALYSIS

The data collected has been processed and analysed by various methods. “As data are collected, they should be examined for completeness, comprehensibility, consistency and reliability.” (Claire, 1959).

3.19. DATA EDITING

The collected questionnaire were checked for its completeness and edited as required. Since most of the questionnaire were collected personally by the researcher, it is possible to check and edit the questionnaire in front of the respondent, if required. But in the case of indirect questionnaire collection approach, the editing of data was able to done in a limited way, because all the respondents were not able to contact directly again.

3.20. CODING

Once the editing of data has been completed, next stage was the coding of the responses. Each item in the questionnaire was given unique code using number. For example, items in the questionnaire 1 are coded as 1 for ‘strongly disagree’, 2 for ‘disagree’, 3 for ‘no opinion’, 4 for ‘Agree’ and 5 ‘Strongly Agree’. The demographic
responses were also coded with numbers. For example, the variable, male is coded with 01 and 02 indicates a female respondent. In the same manner, the variables like Age, religion, category, and place of residence were coded using numbers. The responses were then keyed to a SPSS program. Blank questionnaire. If 25% of items or more were left unanswered, that questionnaire should be excluded from the analysis. If it is less than 25%, at the time of analysis the computer program will be allowed to ignore the blank responses.

3.21. DATA ANALYSIS METHOD

The method used in the study is exploratory as it utilizes scoring of the variables. The collected data contains both the qualitative and quantitative data. Accordingly, the study uses both qualitative and quantitative techniques for the analysis of data. The statistical analysis comprised of two stages. The first stage examined the descriptive statistics of the measurement items and assessed the reliability and validity of the measure applied in this study. The second stage tested the proposed research model and this involves assessing the contributions and significance of the manifest variables path coefficients (Grimm, 2000).

The computer program, Statistical Package for the Social Sciences (SPSS version 20) is used to analyze the data.

A one sample Z test was used to investigate the level of agreement of each of the variables. To explore the significant difference in response between two companies, an independent Z-test was utilized. ANOVA test was applied to find out any difference in responses caused by demographic variables. Later, the Chi square tests were adopted to realize the dependency of the non-scored questions and the demographic factors (Yuan and Bentler, 2004). The acceptable level of significance was $P < 0.05$.

3.22. STATISTICAL TOOLS USED

The following are the techniques used for data analysis.
3.22.1. COEFFICIENT OF VARIATION

The coefficient of variation (CV) is the most commonly used technique particularly in studies like this to compare the variability of two or more than two series of their relative variation. The series, for which the coefficient of variation is greater, is said to be more variable or conversely less consistent, less uniform, less stable or less homogeneous. The formula for calculating correlation coefficient is;

\[ CV = \frac{\text{Standard deviation} \times 100}{\text{Mean}} \]

3.22.2. MEAN PERCENTAGE SCORE

To identify the level of satisfaction of the variables we use the Mean percentage score, which is calculated using the formula;

\[ MPS = \frac{\text{Mean score of the variable} \times 100}{\text{Maximum possible score}} \]

3.23. TESTS USED IN THIS STUDY

Chi square- test of Independence, T-test, Z test and One way ANOVA

To test the hypothesis, that two attributes are associated or not, the Chi-square test for independence has been applied. Chi-square is measured as \( \chi^2 = \sum \frac{(O - E)^2}{E} \), where \( O \) refers to the observed frequencies and \( E \) for the expected frequencies (the ratio of the product of the row total and column total to the grand total).

3.23.1. ONE SAMPLE TEST Z-TEST

One sample Z- Test is a statistical procedure used to examine the mean difference between the sample and the known value of the population mean. In one sample t-test, the population mean is known.

\[ Z = \frac{(\bar{x} - \mu_0) \sqrt{n}}{s} \]
3.23.2. TWO SAMPLE Z-TEST

The Independent-Samples Z Test procedure compares means for two groups of cases. Ideally, for this test, the subjects should be randomly assigned to two groups, so that any difference in response is due to the treatment (or lack of treatment) and not to other factors.

$$ Z = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}} $$

The test Statistics is

3.23.3. ONE-WAY ANOVA

The One-Way ANOVA procedure produces a one-way analysis of variance for a quantitative dependent variable by a single factor (independent) variable. Analysis of variance is used to test the hypothesis that several means are equal. This technique is an extension of the two-sample t test. Besides, for determining that differences exist among the means, researcher wants to know which means differ. For this purpose, a post hoc test (multiple regressions) was adopted. Contrasts are tests set up before running the experiment and post hoc tests are run after the experiment (Mac Callum, 2003).