MATERIALS
AND
METHODS
CHAPTER III

METHODOLOGY

The following chapter deals with the methodology adopted for the present multi-dimensional micro-level study. The need and statement of the research problem was defined and focal points were clearly emphasized. The present study was based on the primary data collected from the field visits and interviewing weavers, traders and consumers, with an understanding of data was obtained from various Government, Non-Government and private organizations working for Khadi and Handloom industry and from various libraries. To obtain relevant literature the investigator visited several libraries, Government and Non-Government organizations, and websites and reviewed the related literature. The libraries visited were Faculty of Management Studies library, Baroda, Hansa Mehta library, Baroda, Centre for Economics and Social Studies, Hyderabad and also libraries at National Institute of Fashion Technology, New Delhi, Gandhinagar and Hyderabad, Osmania University Library, National Institute of Rural Development Library, Hyderabad Central University, ICFAI, Indian School of Business, Hyderabad.

Copious secondary sources helped to understand the structure of Khadi and Handloom industry of Andhra Pradesh. A holistic study of the industry covering both Khadi and Handloom sectors together were studied at one platform specifically with respect to marketing strategies and consumerism. The three important elements of these sectors namely weaver, trader and consumer combined study as a whole was taken up in the present study. Therefore, the present exploratory research was carried out in the State of Andhra Pradesh, India.

3.1. RATIONALE OF THE STUDY

The material and methods adopted for this multi dimensional microlevel exploratory study were:

1. Study and understanding of all the ten five-year plans, reports of different committees and research works by different university scholars focusing Khadi and Handloom sectors.
2. Various Government and Non-Government Organizations were visited personally, to understand their structure and role in Khadi and Handloom sectors. Opinions of higher officials were taken to better understand the sector.

3. A pilot study was conducted at silk nagar of the Nalgonda district which helped to pre-test the interview schedules of weavers, wholesalers/retailers and consumers. A sample of 12 in each category was taken for pilot study.

4. A sample of 28 traditional Khadi and Handloom units was selected and field visits were conducted in 3 regions of Andhra Pradesh. i.e. Andhra or Circar, Rayalaseema and Telangana regions. Purposive sampling technique was used to select the places. Production centers with concentration of traditional weavers were selected. Profiles of these units were studied. Success and failure parameters of the units were noted down.

5. Case studies of the 14 weavers were taken for qualitative analysis. Complete data as per questionnaire could be pooled from 14 centers only with a sample size of 12 from each centre covering 336 weavers and pooled for statistical testing.

6. The traders-retailers and wholesalers of the centers were interviewed through a structured interview schedules. A total of 336 were interviewed through purposive sampling. They included the master weavers, Government Khadi Bandars, Private and Non-Government Organization’s retail outlets, and such a primary data was pooled and quantified to statistical testing.

7. The consumers of all age groups from different cosmopolitan cities and towns were interviewed through interview schedules. Samples of 336 consumers were interviewed, from the production centers and retail outlets.

8. The study was conducted during the year 2000-2007.

2.2. SAMPLING PROCEDURES:

The study was conducted in various districts of Andhra Pradesh. Sampling technique used for the selection of districts and co-operative societies was based on various criteria.
FIGURE 3: THEORETICAL FRAMEWORK
MULTIDIMENSIONAL, MICROLEVEL
EXPLORATORY
STUDY PLAN FOR DATA COLLECTION

KHADI AND HANDLOOM INDUSTRY
IN ANDHRA PRADESH, INDIA

KHADI SECTOR

HANDLOOM SECTOR

PROJECT I
WEAVERS
COTTON/SILK

PROJECT II
WEAVERS
COTTON/SILK

PROJECT III
WHOLESALERS/RETAILERS
a) GOVERNMENT

PROJECT IV
WHOLESALERS/RETAILERS
b) PRIVATE
c) GOVERNMENT

d) PRIVATE

PROJECT V
WHOLESALERS/RETAILERS
b) PRIVATE

PROJECT VI
WHOLESALERS/RETAILERS
d) PRIVATE

PROJECT VII
CONSUMERS
(HAND WOVEN FABRICS)
Purposive sampling technique was used for selecting the (Khadi & Handlooms) traditional weaving centers with specific identity for their products which are the characteristic of Andhra Pradesh state. The Khadi institutions and Handloom centers under the study were presented along with their locations as below.

2.2.1 Weavers: Twelve members were interviewed in a selected place, separately for Khadi and Handloom

2.2.2 Wholesalers/Retailers: Six traders or merchants selling the Handloom textiles were interviewed in each place.

2.2.3 Consumers: A sector of the people interested in Handloom cottons and silks or Khadi textiles, randomly selected among the customers visiting the shops at several places with a sample of 12 from each place.

Table 6: INSTITUTIONS OF KHADI SELECTED FOR THE PRESENT STUDY

<table>
<thead>
<tr>
<th>S.No.</th>
<th>INSTITUTION</th>
<th>DISTRICT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Bhagyanagar Khadi Samithi</td>
<td>Saroornagar, Rangareddy</td>
</tr>
<tr>
<td>2.</td>
<td>A.P. Khadi Gramodhyog Sangham</td>
<td>Hyderabad</td>
</tr>
<tr>
<td>4.</td>
<td>Metpalli Khadi Gramodhyog Pratisthan</td>
<td>Metpalli, Karimnagar</td>
</tr>
<tr>
<td>5.</td>
<td>Wavilal Khadi Gramodhyog Pratisthan</td>
<td>Wavilal, Karimnagar</td>
</tr>
<tr>
<td>6.</td>
<td>Gadwal Taluk Khadi Gramodhyog Sangh</td>
<td>Gadwal, Mahabubnagar</td>
</tr>
<tr>
<td>7.</td>
<td>Gramadhan Nirman Samithi</td>
<td>Nagarkurnool, Mahabubnagar</td>
</tr>
<tr>
<td>8.</td>
<td>Sree Seetharama Khadi Gramodhyog Sangh</td>
<td>Vanaparthi, Mahabubnagar</td>
</tr>
<tr>
<td>9.</td>
<td>Grama Parisramala Sangham</td>
<td>Dharmavaram, Anantapur</td>
</tr>
<tr>
<td>10.</td>
<td>Resham Khadi Gramodhyog Sangham</td>
<td>Dharmavaram, Anantapur</td>
</tr>
<tr>
<td>11.</td>
<td>Grama Swaraj Sangham</td>
<td>Kurnool</td>
</tr>
<tr>
<td>12.</td>
<td>Grama Swarajya Sangham</td>
<td>Srikakulum</td>
</tr>
<tr>
<td>13.</td>
<td>The Guntur Zilla Khadi Gramodyoga Samstha</td>
<td>Guntur</td>
</tr>
<tr>
<td>14.</td>
<td>Narayanapet</td>
<td>Narayanapet, Mahabubnagar</td>
</tr>
<tr>
<td>S.No</td>
<td>HANDLOOM CO-OPERATIVE SOCIETY</td>
<td>DISTRICT</td>
</tr>
<tr>
<td>------</td>
<td>-----------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------</td>
</tr>
<tr>
<td>1</td>
<td>Pochampally, Koyalagudem</td>
<td>Pochampally, Nalgonda</td>
</tr>
<tr>
<td>2</td>
<td>Chowtuppal</td>
<td>Nalgonda</td>
</tr>
<tr>
<td>3</td>
<td>Sri Ranganayakula Swamy Silk Weaver's Co-Operative Production and Sale Society Ltd.</td>
<td>Proddatur, Cuddapah</td>
</tr>
<tr>
<td>4</td>
<td>Madhavaram Handloom Weavers Cooperative society</td>
<td>Madhavaram, Cuddapah</td>
</tr>
<tr>
<td>5</td>
<td>Handloom Weaver's co-operative production and sales society Ltd.</td>
<td>Ija, Gadawal-Mahabubnagar</td>
</tr>
<tr>
<td>6</td>
<td>Kothakota Handloom weavers co-operative society</td>
<td>Kothakota, Mahaboobnagar</td>
</tr>
<tr>
<td>7</td>
<td>Rajoli Handloom weavers co-operative production and sales society Ltd.</td>
<td>Rajoli, Mahaboobnagar</td>
</tr>
<tr>
<td>8</td>
<td>Dharmavaram</td>
<td>Dharmavaram, Anatapur</td>
</tr>
<tr>
<td>9</td>
<td>Mangalagiri Handloom Weavers Cooperative Society</td>
<td>Mangalagiri, Guntur</td>
</tr>
<tr>
<td>10</td>
<td>Yemmiganur Weavers Cooperative Production and Sales Society Ltd.</td>
<td>Yemmiganur, Kurnool</td>
</tr>
<tr>
<td>11</td>
<td>Chowdeshwari Handloom Weavers Cooperative Society</td>
<td>Venkatagiri, Nellore</td>
</tr>
<tr>
<td>12</td>
<td>Chirala and Epurupalem</td>
<td>Chirala, Prakasham</td>
</tr>
<tr>
<td>13</td>
<td>Srikakulam</td>
<td>Srikakulam, Srikakulam</td>
</tr>
<tr>
<td>14</td>
<td>Narayanapet</td>
<td>Narayanapet, Mahaboobnagar</td>
</tr>
</tbody>
</table>
FIGURE 5: HANDLOOM CENTERS

Andhra Pradesh

Maharashtra

Karnataka

Tamil Nadu

Map not to Scale

State Capital
State Boundary
District Boundary
District Headquarter
The above Khadi and Handloom centers were also utilized for purposive sampling of the Traders in wholesale/retail outlets as well as consumers visiting these outlets were interviewed.

2.3. **STUDY OF PROFILES:**

Apart from the quantitative data, the profile study was made for all the above centres covering the origin, financial input, size of the units, designs and products, production levels, quality testing, marketing channels etc. under the following headings.

(1) Introduction with general information.
(2) Raw material.
(3) Production.
(4) Products.
(5) Marketing.

2.4. **INDIVIDUAL CASE STUDIES:**

A structured case study schedule was implemented covering the following parameters, apart from the quantitative data to better understand the real life situations of the weavers. With regards to individual weavers, case study was made depicting the life style, education, financial position, social status and the future outlook towards continuation of this profession.

**DESCRIPTION OF TOOLS USED:**

Field studies were the main source of primary data. Separate interview schedules were designed to collect data from weavers, wholesalers/retailers and consumers. Closed and open-ended questions were used appropriately in order to obtain correct information from the subjects.
2.5. INTERVIEW SCHEDULE FOR THE SELECTED WEAVERS

The Interview Schedule for the selected Khadi and Handloom Weavers consisted of 45 (Forty Five) questions in total under eight heads. A copy of the questionnaire is presented in annexure-I.

2.6. INTERVIEW SCHEDULE FOR THE SELECTED WHOLESALERS / RETAILERS

Interview schedule for the selected wholesaler/retailers consisted of 25 (twenty five) questions with VI main headings and the same questionnaire is used for Government Khadi or KVIC showrooms, Government Handloom showrooms, Private Khadi outlets/merchants and Private Handloom outlets/merchants. A copy of the questionnaire is presented in annexure-II.

2.7. INTERVIEW SCHEDULE FOR THE SELECTED CONSUMERS

Interview schedule for the selected consumers consists of thirty questions with VIII main headings, which is used at all places irrespective of Khadi or Handloom show room or exhibition or melas. A copy of the questionnaire is presented in annexure-III.

2.8. STATISTICAL ANALYSIS

The reposes received from various Weavers, Retailers and Consumers as per the questionnaire. Those answers containing different types like qualitative, quantitative or open ended type and close ended type were sorted out. The qualitative information was presented in the form of profiles and quantitative data was subjected to statistical testing as per Panse and Sukhatme. (68)

2.8.1. Qualitative data: scheduled information from individual families obtained was presented through case studies, separately for Handloom weavers, Khadi weavers, wholesalers, retailers and consumers.
2.8.2. Quantitative data: was analyzed and presented in the form of frequency distributions, total, mean and percentage. Appropriate statistical tests such as standard deviation (SD), Co-efficient of variability (CV %), Co-efficient of correlation (r) were used, as per Panse and Sukhatme (68). The analyzed quantitative data was presented in the form of tables and graphs.

2.8.2.1. Frequencies: [fr.]: The primary data collected from randomly selected individuals from each centre was reassembled as per the similar answers, as the frequency of response out of total 12, in a particular centre. Such a kind of frequency units ranging between 1-12 for each title and subtitle questions / parameter were tabulated in the final data sheet. Similarly all the 14 centers were assembled side by side as a holistic table of compilation for Handloom weavers, Khadi weavers, wholesalers, consumers of Andhra Pradesh and presented separately. This was taken as data source for statistical testing.

2.8.2.2. Summation: $\Sigma$: The frequencies of response given by the weavers was pooled for each parameter in a centre, and for all the parameters in all 14 centers was totaled as $x_1 + x_2 + x_3 + \ldots \ldots x_n$ where $n = 14$. These sums were presented next in order, along with frequencies.

2.8.2.3. Average or means: $\bar{X}$: The sum of all respondents was divided by total number of 168 respondents to obtain the mean frequency, is given by the formula as,

$$\bar{X} = \Sigma \frac{X_i}{N}$$

Where in $\Sigma = \text{Total or sum}$

$X_i = x_1, x_2, x_3, \ldots \ldots x_n \text{ variables}$

$N = \text{number of variables}$

2.8.2.4. Standard deviation (S.D): $\sigma$: The standard deviation of frequencies was calculated, by following the formula as,

$$\sigma = \sqrt{\left( \Sigma f d x^2 \right) / N - \left( \Sigma f d x / N \right)^2} \cdot X_i,$$

Where in $\sqrt{} = \text{square root of}$, $\Sigma = \text{sum or total}$,

$f d x = \text{frequency of deviations of } x \text{ variable}$,

$N = \text{total observations and}$

$X_i = \text{absolute value of } x$. 

55
2.8.2.5. **Co-efficient of variability (C.V. %):** The Co-efficient of variability indicates the degree of precision with which the treatments are compared and is a good indication of the reliability of experiment. It expresses the experimental error as percentage of mean. Thus, the higher C.V. value, the lower reliability of data. The Co-efficient of variability was calculated, by using the formula as,

\[
\text{C.V. \%} = \frac{\text{S.D}}{\bar{X}} \times 100,
\]

or

\[
\text{S.D.} \div \text{mean and multiplied by 100.}
\]

Where in S.D. = standard deviation

\[
\bar{X} = \text{grand mean and then expressed as percentage.}
\]

2.8.2.6. **Correlation co-efficient (r):** The simple correlation is a measure of linear relationship between any two absolute values tending to normal distribution. The effects of relationship between Khadi and Handloom weavers, wholesalers and retailers with consumers was calculated by using the formula as, \( r = \) simply, the product of covariance of two series, divided by standard deviation of \( x \) \( y \).

\[
r = \frac{\Sigma xy}{n} - \frac{(\Sigma x)(\Sigma y)}{n^2},
\]

Where in \( n \) = number of pairs of observations,

\[
\Sigma x = \text{deviations from mean value of first variable,}
\]

\[
\Sigma y = \text{deviations from mean value of second variable,}
\]

\[
\Sigma xy = \text{the sum of products of corresponding deviations,}
\]

\[
\sigma_x = \text{standard deviation of first set of variables and}
\]

\[
\sigma_y = \text{standard deviation of second set of variables and tested against table "r" values at 5% level for n-1 degrees of freedom.}
\]
2.8.2.7. **t-test (t):** The *t* -test assesses whether the means of two groups are statistically different from each other. This analysis is appropriate whenever one want to compare the means of two groups, and especially appropriate as the analysis for the post test-only two-group randomized experimental design. Formula for the *t*-test is a ratio. The top part of the ratio is just the difference between the two means or averages. The bottom part is a measure of the variability or dispersion of the scores.

\[
t = \frac{\bar{x}_T - \bar{x}_C}{\sqrt{\frac{\text{var}_T}{n_T} + \frac{\text{var}_C}{n_C}}}
\]

The *t*-test, one-way Analysis of Variance (ANOVA) and a form of regression analysis are mathematically equivalent.

Where in \( \bar{x}_T = \text{mean of first variable} \),
\( \bar{x}_C = \text{mean of second variable} \),
\( \sqrt{\text{var}_T} / n_T = \text{S.D. of first variable} \) and
\( \sqrt{\text{var}_C} / n_C = \text{S.D. of second variable} \).

The above data comprising of questions for Khadi and Handloom Weavers in each group were presented in simplified table forms separating for each parameter as a unit for presenting the results. The data obtained from wholesalers/retailers with a different set of parameters were presented separately for simplification. Similarly data collected from large sector of (public / customers) consumers of hand made fabrics having quite a different interview schedule were presented in another table.