CHAPTER – III

RESEARCH METHODOLOGY
3.1. **INTRODUCTION**

The research design indicates a plan of action to be carried out in connection with a proposed research work. The process of research design includes the selection of the research problem, the presentation of the problem, the formulation of hypotheses, conceptual clarity, methodology, and data collection, testing of the hypotheses, interpretation, presentation as well as suggestions and recommendations to address the issues related to the problem.

The design of research evolved by the researcher is to answer the research questions with utmost validity, objectivity, accuracy and economy. In the research process the researcher visualizes and implements a specific plan in order to generate relevant empirical evidence. A research design suggests the appropriate directions for making observation and conducting analysis of data.

Accordingly, the researcher has adopted a descriptive research design for the project.
3.2. STATEMENT OF PROBLEM:

The cluster development approach is an internationally accepted concept facilitating the growth of the MSME sector. Clusters help in overcoming several challenges of the MSMEs such as obsolescence, bulk purchase of raw materials, sophisticated technology, skill levels, quality and credibility of MSMEs, etc. The cluster concept becomes relevant when there is a concentration of largely homogenous enterprises within a relatively limited geographical area. It will facilitate the cluster intervention because of their similarity of needs and support requirements. It can speed up the dissemination of best practices because of the pervasiveness of demonstration effects. It can also allow a distribution of the fixed costs of interventions among a large number of beneficiaries. Virudhunagar District is hosting a variety of industrial units in sectors such as oil, match box, fire works, printing, etc. The present research is to study the impact of cluster approach amongst the handmade match units in Virudhunagar District.

3.3. SCOPE OF THE STUDY:

The scope of the study is to find out the existing condition of the match units in handmade sector. In essence, the study aims at obtaining a comparative analysis of safety match cluster with regard to the working, effectiveness and dynamics of the cluster. It is also meant to identify the factors impending the smooth functioning and growth of the cluster.
The main core of this approach is to identify the right tools and techniques and to apply these inputs to achieve faster development in the handmade safety match manufacturing sector. These will help many ways to improve their capacities and capabilities to fight against the competitions emerging from the mechanized sector.

3.4. **AREA OF STUDY:**

The area of study is confined to Virudhunagar District. Traditionally Virudhunagar District is one of the most industrialized places of Tamil Nadu, The term 'virudu' means 'Award' in Tamil. Virudhunagar exports all kinds of oil to Dubai and Srilanka and also exports Cotton, chilli, spices, cardamom to USA and Singapore. Virudhunagar is a famous business centre without markets. The Business people of Virudhunagar play an important role in price fixation of consumer products. Hence there is a popular saying, "virudunagar produces nothing but controls everything".

3.5. **RESEARCH OBJECTIVES**

- To study the present status of the match industries in Virudhunagar District.

- To study the impact of cluster approach in reducing the cost of production in terms of making the availability of raw material at cheaper cost.
• To study the critical areas of interventions for promoting the handmade sector under cluster mode.

• To study the post-acquisition aspects including creation of common utility centres and common marketing, common branding, soft linkages etc.,

3.6. RESEARCH DESIGN

The researcher has used descriptive research design for his research study. These descriptive designs are induction and deduction. Induction involves drawing general conclusions from the results of empirical studies with existing theory not being of primary concern. Deductive reasoning however, places greater value on the importance of existing theory with hypotheses derived from existing theories and empirically tested to see if they are valid. This study is of a deductive nature as it tests cluster development facets through assessing its ability to accurately discriminate among the factors influencing the level of cluster development in Virudhunagar district.

3.7. COLLECTION OF DATA

The data were collected through a structured non-disguised questionnaire. The questionnaire was administered among the member units of the safety matches cluster in Virudhunagar District.
3.8. SAMPLING FRAME

The data were collected from all the members of CFC in Virudhungar district. The whole population has been selected for the study. Therefore, Census method was adopted. A total number of 71 units was surveyed by the researcher. The data were collected during the period January 2014 and April 2014.

Questionnaire Method:

Structured non-disguised questionnaires were used during the research process to know the development of Cluster and subsequently to understand the level of financial performance of cluster (CFC) of Virudhungar District. The questionnaire was designed using the variables generated from the personal interviews of the researcher with few member units and through desk research.

A pilot study was conducted to test the questionnaire amongst the few member units. Based on the responses, the questionnaire was further improved and finalized.
**Scale Development:**

A five point Likert scale was used in the questionnaire to understand the perception of the member units on various issues. The five categories of responses were developed as detailed below:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Status of response</th>
<th>Points allotted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Strongly agree</td>
<td>5</td>
</tr>
<tr>
<td>2.</td>
<td>Agree</td>
<td>4</td>
</tr>
<tr>
<td>3.</td>
<td>Undecided</td>
<td>3</td>
</tr>
<tr>
<td>4.</td>
<td>Disagree</td>
<td>2</td>
</tr>
<tr>
<td>5.</td>
<td>Strongly disagree</td>
<td>1</td>
</tr>
</tbody>
</table>

**Data Analysis**

After the data collection, the collected data were analyzed by the package named as Statistical Packages for Social Sciences (SPSS 16).

### 3.9. TESTS FOR VALIDITY AND RELIABILITY

The data was first evaluated for its reliability and validity with the help of Cronbach’s Alpha and KMO test. It was inferred that the Barlett’s test was significant with $P = 0.000$ being less than 0.05. Sampling adequacy measured using the Kaiser – Meyer – Oklin (KMO) of 0.7664 was taken as acceptable.
3.10. LIMITATIONS OF THE STUDY

- The cluster approach has been implemented in several districts of Tamil Nadu. However, the area of present study is confined to only Virudhunagar District. This is due to paucity of time and cost.

- Virudhunagar is housing a variety of industrial units. In fact, Virudhunagar exports all kinds of oil to Dubai and Srilanka and also exports Cotton, chilli, spices, cardamom to USA and Singapore. Virudhunagar is a famous business centre without markets. However, the present study is confined to safety matches cluster in the handmade sector. The recommendations of the study, therefore, may not be applicable to other types of industries.

- There are 71 units which have become members of the Common Facility Centre (CFC) of the safety match cluster in the handmade sector. The study was not extended to non member units in Virudhunagar District.

- The period of study was between January – April 2014 which is short. There was a general election during May 2014. There might be over expectations in the pre election period and that could have influence the response of the member units.

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