CHAPTER - IV

RESEARCH DESIGN AND METHODOLOGY

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• Stratification of Modern Small Scale Industries
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CHAPTER OVERVIEW

In the previous chapter, it has been observed that no doubt, a web of small scale industries in particular, has appeared on the industrial map of the state, but the industrial growth in the state has been tardy which has been largely due to large scale industrial sickness in small scale industries. The sickness in this particular sector in the state is widespread and has reached to serious dimensions. As yet, no empirical study has been conducted by any agency whatsoever, which could have brought the real actors and factors, responsible for sickness to fore. But in 1992, a seminar-cum-workshop was organised at Jammu wherein number of working papers were presented by different agencies and individuals highlighting the different aspects of industrial sickness in small scale industries in the state. However, the arguments presented were mostly based on personal opinions, thus lacking any empirical evidence. Further, the bias of the presenters have greatly influenced the trueness of the observations made. Infact, the phenomenon of industrial sickness in the state, still remains a complex one which in turn is resulting in the formation of unsound policies for putting the industrial economy on the track of growth and prosperity.

The present study has been undertaken to evolve a deeper probe into the problem of industrial sickness in Modern small scale industries in the state of Jammu and Kashmir so as to present the malaise of sickness in its right perspective. The study is perceptual-cum-diagnostic in nature and aims to unravel the major and dominant inhibiting factors responsible for industrial sickness. To unearth the real factors and the Actors behind the different factors, the case histories of some selected sick units have also been critically analysed and based thereon, have identified the major causes of sickness and role failures of different role players (Actors). At the end, the study evolves the art and skill of detecting early warning signals and symptoms of sickness so as to initiate an appropriate turnaround strategies well in time. The policy implications put-forth in the study reflect the ground realities and are expected to go a long way in the development of healthy industrial environment in the state.
OBJECTIVES OF THE STUDY

At the planning stage of the study, specific objectives were set to provide the basis of enquiry. The main objective of the study was to unearth the real factors and actors that are responsible for sickness in modern small scale industries in the State. To achieve the above basic objective, the study specifically aims at studying the following:

1. To have a complete insight into the industrial environment of the State with a view to decide about the congeniality of the prevailing environment for small scale industries; identification of the areas where most of the industrial potential lies and to unveil the environmental bottlenecks that largely impede in the smooth conduct of industrial operations.

2. To critically examine the industrial growth and progress achieved in particular in small scale sector so as to decide whether the state is on high growth path in the industrial sector and if not what has hindered the industrial growth.

3. To make an in-depth probe objectively into the 'Factors' that have actually caused industrial sickness in modern small scale industries in the state.

4. To critically analyse the adequacy of role performance of financial and service organisations operating in the environment of small scale industries including entrepreneurs so as to assess the nature of role failures, how role failure on part of various role players (Actors) has engendered sickness.

5. To study the mechanism of the government for controlling sickness with the purpose to identify the weaknesses in the system and evolve a system that will help in the detection of sickness at an incipient stage.

6. To come-up with the policy implications and the underlying principle behind these suggestions being "prevention is better than cure".
In addition to the above aspects of industrial sickness, the study also aims:

1. To make a critical review of the related literature on the subject so as to see what others have to say about the different aspects of sickness and also to identify the research gaps for future investigation.

**HYPOTHESIS**

In consonance with the above objectives of the study, the following scientific hypothesis has been set-up to give a proper direction to the study through a hypothetical analysis:

1. The state is largely suitable for small scale industries with definite industrial potential in some selected areas where the state can do much.

2. The industrial growth in the state has been on low growth path mostly due to more industrial failures in the small scale sector.

3. The sickness in modern small scale industries is multi-factorial in function and in consequence multi-dimensional.

4. Most of the sickness in modern small scale industries is due to the inadequacy of role performance of financial and service organisations operating in the environment of the small scale units in the state.

5. Lack of industrial conception among the different people and the absence of entrepreneur class adaptive to competitive and changing market forces has also added to the problem of sickness in modern small scale industries in particular, in Kashmir division.

6. Industrial infrastructural bottlenecks in the state has not caused industrial sickness in the small scale sector, but only hastens the process of sickness if other forces turn unfavourable.

7. Subsidies and other incentives available to the small scale entrepreneurs in the state have only breded unscrupulous
entrepreneurs, thus have given birth to bogus units and perfunctory bureaucracy.

8. Sickness in modern small scale industries has reached to serious proportions also due to the absence of continuous appraisal and monitoring for early detection by any agency and also on account of the government inaction to control the malaise of sickness.

SCOPE OF THE STUDY

The study covers whole of the geographical area of the State of Jammu and Kashmir falling on this side of the boarder. The state consists of three divisions governed by common law and regulations, however, differ in socio-cultural, geo-physical and demographic features. The whole of the J&K State has been taken purposely with a view to make a comparative study between different divisions so as to unveil the influence of socio-cultural, geo-physical features etc. on the industrial functioning and the sickness. The comparative study between Jammu division and Kashmir division also aims at resolving the notion that the people in Kashmir division in general lack industrial culture and an entrepreneurial class adaptive to changing business initiatives is absent.

As stated earlier that the study has been restricted to the "Modern Small Scale Industries" in Jammu and Kashmir. The study has been deliberately restricted to modern small scale industries in view of the following facts:

1. Since Mid 1970's, the thrust of different policies was to develop modern small scale industries instead of traditional small scale industries.

2. There has been sufficient growth in the number of modern small scale industries over the time, contributing sufficiently to the industrial production and to the employment generation in the State.

3. Much of the industrial potential in the state lies in this sector and if developed properly it can contribute substantially to the state's economy.
4. The incidence of sickness is more in these type of industries. The sickness in modern small scale industries in the State is widespread and has reached to alarming proportions, thus causing huge losses to the state's economy.

5. The modern small scale industrial units are mostly located in different industrial estates, thus accessible. But on the contrary, the traditional small scale industries are dispersed over a wide area, thus making it very difficult for an individual researcher with his limited resources to approach these industries for detailed probing.

MODERN SMALL SCALE INDUSTRIES

The small scale industries have been grouped into traditional and Modern small scale industries. Traditional small scale industries include those which process more or less traditional products in a labour intensive way by means of relatively simple tools and techniques. Whereas, the modern small scale industries use power oriented systems and whose machinery has some technological sophistication and these are generally located in the urban and sub-urban areas. Their products include modern consumption's and also some traditional products.

PREFERENCE PERIOD

The data referred in the study has been from 1970 to 1995. The reference period of 1970-1995 has been deliberately chosen as the initiative to industrialise the state was taken in the beginning of seventies only when the state government formulated a comprehensive set of incentives for the development of industries in the state and also current data on different aspects of small scale industries in the state is available only upto 1995. However, wherever required and data available, the study has referred to the data prior to 1970 and beyond 1995.
RESEARCH METHODOLOGY

The specified objectives for the study and the hypothesis have demarcated the scope of the study and the research methodology to be followed to test the hypothesis. Realising the role of research methodology in the fact finding mission, every care has been taken in the selection of tools and techniques, and in designing the procedures used for generating, collecting and evaluating data. Methodology has been designed in a way as to neutralise the effects of impediments that may come in the collection of data. To test the hypothesis laid down for the study, the field study was conducted wherein a combination of direct approach, comprising of questionnaire aided interviews, discussions and observational techniques were followed. In addition, statistical handbooks, committee and survey reports, seminar papers, reports on physical achievements, official records and other related literature has been studied to substantiate the hypothesis laid down for the study. Realising the importance of the sensitivity of the investigator to varied situation in the field study, the scholar has remained highly sensitive throughout the course of investigation.

SOURCES OF DATA

To substantiate the hypothesis laid down for the study, the information on different aspects of the problem has been tapped both from primary and secondary sources, however, the primary source constitutes the main source of information. The secondary data on employment, industrial production, contribution from different sectors to SDP, resources available for industrial development, economic laws and regulations, demographic features of the state, the extent of industrial sickness in modern small scale industries in the state etc. has been collected from published and unpublished documents, reports, statistical handbooks, annual reports, manuscripts, etc. The secondary data used in the study was collected from the publications and office records of the following government and private agencies:

2. Centre for monitoring Indian Economy, Govt. Of India, Mumbai (CMIE)


6. Department of Industrial Development, Ministry of Industries, Govt. of India, New Delhi.

7. Development Commissioner (SSI) Department of SSI and ARI, Ministry of Industries, Govt. Of India, New Delhi.


9. Reserve Bank of India, New Delhi.

10. Economic Research Department, State Bank of India.


14. All India Sick SSI Association, Hyderabad.

15. State Public Sector undertakings.


19. Power Development Department, J&K Govt.,

20. Industrial Potential Surveys, Conducted by different Survey teams.
Wherever, the statistical information was not available, the estimating technique has been used to workout the figures based on universally accepted norms.

**PRIMARY DATA**

For ‘Actor - Factor Analysis’ which aims at unearthing the factors and the Actors that have actually caused sickness in modern small scale industries in the state, the field study was conducted where over and above the participant and non-participant approach, discussions, observations, and the interviews with the entrepreneurs, officers of different promotional agencies and financial institutions, Banks, Office bearers of different industries associations, researchers, Policy-makers and consumers were conducted systematically to have a diverse opinion about the problem of sickness in modern small scale industries in the state. For the purpose, a well structured interview schedules (given in Appendix II - VI) were prepared for all types of respondents. To substantiate the empirical findings, an indepth study of the case histories of some sick industrial units has been made so as to capture the process of sickness. Also, the working of industrial units has been observed to find whether the units are being managed systematically and efficiently. Further, the project/feasibility reports of some sick industrial units were thoroughly studied to check whether the reports reflect the ground realities and encompass all the aspects of feasibility.

**QUESTIONNAIRE DEVELOPMENT AND PRE-TESTING**

In all eight well structured questionnaires were prepared plus a diagnostic schedule to see whether the unit to be investigated is sick or not. The interview schedule for the entrepreneurs was designed in a way as to elicit the information about different aspects of Industrial sickness. The said interview schedule has been divided into Five parts. In part one and two, questions on personal and unit data; in part three questions relating to factors of sickness, like initial planning, Resources, Infrastructure, Entrepreneurial skills, Management, etc; questions on expected role failure of different role players in part 4th. were arranged. In part fifth, the question regarding the consequences of sickness were asked and in part 6th the suggestions for the control of sickness were sought. The other interview schedules were for seeking the information and
opinions of different officers working in different concerned banks, service and financial organisations like, Directorate of Industries and Commerce, SICOP, SISI, ITCO, J & K State Financial Corporation, Banks. Separate questionnaires were prepared for each of these agencies which have been divided into four parts viz. Personal data, role played in the development of Modern small scale industries in the State, factors of sickness and suggestive measures. Questionnaires were also prepared for seeking the views of the researchers, economists, prominent industrialists, policy-makers and office bearers of different associations of industries.

There is a common notion among the local populace that the goods manufactured within the state are sub-standard. As such, to seek the information regarding the same, a separate questionnaire was designed for administering to the local customers of all classes. As already stated that the data base particularly about the sickness in modern small scale industries is grossly absent in the state as such, the scholar first of all has conducted a survey for identifying sick industrial units in different industrial estates of the state for which a diagnostic schedule was prepared, using the yardsticks propounded by the Reserve Bank of India (Revised) for small scale industries.

**SELECTION OF VARIABLES**

The variables which in general parlance are referred to as causes, factors etc. are the central theme of any research study. It is in view of this fact, it is said that the trueness and completeness of the study is largely being influenced by identification of variables. Knowing this fact, it has been endeavoured during the development of interview schedules for the present study, to identify all the independent and dependent variables that most likely have caused sickness in modern small scale industries under the unique state setting. In the first place, the causes identified by the different researchers in the country have been identified through a review of related literature. The causes identified by some empirical studies have been summarised in table 4.1. After identifying the list of different factors that have been largely identified by different researchers, a through understanding of the industrial setting in retrospective and of the overall industrial environment in which small scale industries operate in the state has been made through
discussions and review of related literature - so as to identify all the factors that most likely have caused sickness in modern small scale industries in the state.

**TABLE -4.1**

<table>
<thead>
<tr>
<th>RESEARCHER</th>
<th>FACTORS OF SICKNESS</th>
<th>ACTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.P. Singh</td>
<td>Inefficient management practices; power shortages; competition, poor quality; lack of raw-materials; diversion of funds; inadequate working capital.</td>
<td>Govt. policies regarding prices and distribution, non-availability of skilled labour, lack of credit.</td>
</tr>
<tr>
<td>V. K. Aggarwal</td>
<td>Under estimation of capital costs, over estimation of demand, poor project implementation, cost escalation, lack of financial discipline; managerial deficiencies.</td>
<td>Lack of necessary inputs, like, raw-materials, power etc.; decline in public sector investment, shortage of finances and working capital and Govt. policies.</td>
</tr>
<tr>
<td>K.S.Bhat, R.K.Mishra and M.G. Hegde</td>
<td>Improper project planning and management; defective management; inefficient operations; problems of technology; financial problems; labour problems and also external factors.</td>
<td>Promoters and management, financial, development and infrastructure institutions, Govt. agencies, personnel of the organisation, competitors, Suppliers and consumers.</td>
</tr>
<tr>
<td>V. S. Deolankar</td>
<td>Poor management, inadequate working capital; lack of raw-materials, unplanned capital expenditures; more debt-equity ratio; poor quality; power shortages; poor capacity utilisation and competition</td>
<td></td>
</tr>
<tr>
<td>Prof.T.Subbi and Dr.P.B.Apparao</td>
<td>Deficiency of Finances and Raw-materials; marketing problems and power shortages.</td>
<td></td>
</tr>
</tbody>
</table>

**PILOT STUDY**

As a step preliminary to the formulation of a schedule, pilot study was conducted so as to gain some systematic knowledge about the problem of small industries sickness and its universe. A sample of 15 sick industrial units and 5 non-sick/weak industrial units from each division and 10 officers of service and financial organisations and banks formed the respondents to the pilot study. The results of the flexible and intensive
interviewing during the pilot study was properly recorded and then carefully analysed for identifying the various variables and the nature of problem and respondents.

### TABLE -4.2

**FACTORS OF SICKNESS**

<table>
<thead>
<tr>
<th>S. NO</th>
<th>INDEPENDENT VARIABLES</th>
<th>DEPENDENT VARIABLES</th>
</tr>
</thead>
</table>
| 1.    | Faculty project planning and poor implementation | i. Absence of market analysis  
ii. Wrong project estimates  
iii. Sub-optimal plant capacities  
iv. Inappropriate technology  
v. Uncompatibility with promoters  
vii. Unplanned capital expenditures.  |
| 2.    | Lack of entrepreneurial skills | i. Motivation  
ii. Initiative and advancement  
iii. Entrepreneurial integrity  
v. Venturesomeness.  |
| 3.    | Insufficient factoral endowments | i. Raw-materials  
ii. Labour/technical skills  
iii. Capital  |
| 4.    | Infrastructural bottlenecks | i. Power shortages  
ii. Transport and communication Problems  |
| 5.    | Inefficient Management practices. | i. Financial discipline  
ii. Ineffective labour management  
iii. Inefficient management of production function.  
v. Management of marketing efforts.  |
| 6.    | Marketability |  |
| 7.    | Infractuous Govt. policies | i. Subsidization  
ii. More procedures and regulations.  
iii. Anciliarisation  |
| 8.    | Changes in general economic conditions etc. |  |
| 9.    | Expected role failure of role players | Actors:  
i. Entrepreneurs  
ii. Directorate of Industries.  
iii. State financial corporation  
v. SICOP  
vii. Employees and Suppliers  |


The variables along with the questions selected following the pilot study, review of related literature and necessary discussions, have been once again discussed with some experts in the field of small scale industries. The queries raised were thoroughly discussed and finally interview schedules, were formally drafted. The variables identified for the study are given in the above table.

The above variables selected include all possible factors of small industries sickness in the state. The variables like entrepreneurial skills, government policies and expected role failure of role players have not been studied empirically by any other researcher whatsoever in the country. Such variables have been chosen in view of the uniqueness of the state with regard to stages of entrepreneurship, socio-cultural and geopolitical realities.

ENTREPRENEURIAL SKILLS

The state of J & K largely has first generation entrepreneurs who have assumed entrepreneurship due to 'induced phenomenon'. It is generally reported that people in general, in the state and in particular, in Kashmir division have little or no preference for entrepreneurship. It is also that the schemes aiming at the development of entrepreneurship have failed to generate necessary impulse for entrepreneurship in the state. Infact, the spirit of entrepreneurship in the state is incipient. It is generally argued in the state that the state lacks the entrepreneur class adaptive to the changing business and market initiatives. It is in view of the above facts it has been studied for its role in the sickness in modern small scale industries.

GOVERNMENT POLICY INITIATIVES

The governments role of a planner, promoter and regulator in the process of industrialisation in the state has been more vital in view of its extreme location, deficient resource endowments and weak entrepreneur base. It may be stated that so far, state government could not come-up with a comprehensive and long term industrial policy. Entrepreneurs are generally reporting more procedures and regulations and infrastructural bottlenecks which have largely impeded the smooth conduct of business operations. So it
becomes essential to probe into this variable so as to identify whether government policies have any role in the industrial sickness or not.

ROLE PERFORMANCE

Small industry in reality is a role play of different role players, some playing the role of a financer, some supplier, some trainer, some planner, some organiser and manager etc. As such, the success or failure of a small industrial unit largely depends upon the adequacy or inadequacy of role performance of different role players, operating in the environment of small scale industries. So to identify the real actors in small industries sickness, the role performance of role players is necessary to analyse.

The different variables on which questions were raised in the questionnaires have been distinguished upon the independent and dependent variables and arranged systematically so as to produce desired results. The questions were designed and arranged in a way that the effect upon the dependent variables is attributed entirely to the independent variable and not to any extraneous variable or variables. To measure the perceptual degrees of the respondents towards the factors of sickness etc. Likert type 5 point continuum has been used in the questionnaire viz, Great Extent, (GE) Considerable Extent, (CE) Some Extent (SE), Very Little Extent (VLE) and Not At All (NAA). Arbitrary scores of 5 to the first, 4 to the 2nd, 3 to the third, 2 to the fourth and 1st to the fifth, were given.

PRE-TESTING

Pre-testing of interview schedules was also conducted to detect loopholes if any in the schedules so as to make them more purposeful and practical. A sample of 10 entrepreneurs and two officials from each agency were taken to pre-test the different questionnaires. On the basis of the pre-testing, it was found that some questions are unnecessary, some were too technical, certain questions were improperly arranged and in certain cases respondents prefer open-end questions. It was also found, that the questionnaire for the entrepreneur is lengthy. In the light of these findings, the
questionnaires were amended and re-arranged to make them precise, simple and more effective.

STRATIFICATION OF MODERN SMALL SCALE INDUSTRIES

Modern small scale industries for the present study have been stratified into:

I. Sick Industries

All those units which fall within the preview of the definition of sickness as propounded by RBI (Revised) for small scale industries have been classified as 'Sick Modern Small Scale Industries" no matter whether closed or working and whether declared sick or not. The units which are closed for other than commercial reasons, have not been taken as sick units.

II. Non-Sick Industries

An industrial unit in healthy condition, has been classified as non-sick units. A healthy unit is one which has better financial results and has positive value for net working capital, net worth and favourable debt-equity ratio.

III. Weak Industries

The units whose fundamentals are weak, are referred to as weak Small Scale Industrial units. Such units are tending towards sickness and the process of sickness in these units will hasten if anything unfavourable happens.

SAMPLE DESIGN

Sample designing is essential to all scientific procedures as it influences the representative character of the sample for the study and thereby, final conclusions about the problem. In view of this fact, due care was taken in designing a sample for the study. Since the number of sick and non-sick/weak units were large enough running into thousands as such, it was not possible for the researcher to study all the units. Thus it was decided to study a reasonable sample of the universe.
In order to provide an equal opportunity to every unit of the universe to get selected for the study, a stratified random sampling procedure was followed. In the first place the modern small scale units were grouped into Eight Categories viz., chemicals, mineral products, leather products, electricals and electronics, food products, metal and allied products, wood products and others were clubbed together as miscellaneous industries as the number of sick units in these categories were less. As already stated that the data about the number of sick units in small scale industries in the state is missing, as such, for sampling purposes, the researcher first of all conducted a survey for identifying sick units in different industrial estates where almost all units are modern small scale units and also where majority of the small scale units are located. The units located outside the industrial estates were not surveyed as it was not possible for the individual researcher to locate and reach them.

SELECTION OF RESPONDENTS

The above universe for the study was stratified into (1) sick Modern small scale units and (2) non-sick/weak small scale units. For the purpose of sampling, a list of both sick and non-sick/weak modern small scale units in each industrial estate was prepared and then a technique of stratified proportionate sampling was used for drawing the sample from the universe of entrepreneurs. Approximately a random sample of 5 percent of sick units and 2 percent of healthy/weak units from each category of industries was taken as a sample for the study. In all 147 sick units and 39 non-sick/weak units, representing almost all industrial estates and type of industries have been chosen for thorough investigation. It may be stated here that both the sick and non-sick/weak units were taken for the purpose of cross examination and comparative analysis of facts.

The another group of respondents consists of officers of different financial and service organisation including banks; office bearers of different associations of industries, policy-maker; economists; customers and researchers. Officers both middle and upper levels were selected. Also two economists; two researchers. Commissioner-cum-Secretary, Industries and Commerce, J&K Government and general secretaries of both Jammu and Kashmir Federation of Industries were also interviewed. Also 215 customers,
105 from Jammu division and 110 from Kashmir division respectively were also contacted for obtaining their views about the quality of the produce manufactured in the state and other aspects. The researcher has used his students in the conduct of consumer opinion survey. The officials of different government agencies were stratified into concerned and not-concerned officials and only a given number of related officers were chosen for the study. In all 427 respondents were selected, the breakup of which is given in Table 4.3, for the study.

<table>
<thead>
<tr>
<th>S. NO</th>
<th>Universe</th>
<th>Entrepreneurs</th>
<th>Officers/Office bearers etc. of diff. Organisations/Asso.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Sick Entrepreneurs</td>
<td>71 (Jammu Div.) 26 (Kashmir Div.)</td>
<td>--</td>
<td>147</td>
</tr>
<tr>
<td>2.</td>
<td>Non-Sick/Weak entrepreneurs</td>
<td>21 (Jammu Div.) 18 (Kashmir Div.)</td>
<td>--</td>
<td>39</td>
</tr>
<tr>
<td>3.</td>
<td>Banks</td>
<td>--</td>
<td>--</td>
<td>14</td>
</tr>
<tr>
<td>4.</td>
<td>State Financial Corp.</td>
<td>--</td>
<td>--</td>
<td>6</td>
</tr>
<tr>
<td>5.</td>
<td>SICOP</td>
<td>--</td>
<td>--</td>
<td>6</td>
</tr>
<tr>
<td>6.</td>
<td>Deptt. of Industries &amp; Commerce</td>
<td>--</td>
<td>--</td>
<td>4</td>
</tr>
<tr>
<td>7.</td>
<td>ITCO/SISI</td>
<td>--</td>
<td>--</td>
<td>4</td>
</tr>
<tr>
<td>8.</td>
<td>Federation of Industries</td>
<td>--</td>
<td>--</td>
<td>2</td>
</tr>
<tr>
<td>9.</td>
<td>Researchers</td>
<td>--</td>
<td>--</td>
<td>2</td>
</tr>
<tr>
<td>10.</td>
<td>Economists</td>
<td>--</td>
<td>--</td>
<td>2</td>
</tr>
<tr>
<td>11.</td>
<td>Policy Makers</td>
<td>--</td>
<td>--</td>
<td>1</td>
</tr>
<tr>
<td>12.</td>
<td>Customers</td>
<td>105 (Jammu Div.) 110 (Kashmir Div.)</td>
<td>--</td>
<td>215</td>
</tr>
<tr>
<td></td>
<td>Grand Total</td>
<td>197 (Jammu Div.) 204 (Kashmir Div.)</td>
<td>41</td>
<td>444</td>
</tr>
</tbody>
</table>
COLLECTION OF DATA

With the selected sample of respondents, personal interviews were conducted. However, some respondents particularly, some officers of different promotional agencies have filled-up the questionnaires themselves. While approaching the respondents for interview, first of all they were being briefed about the purpose and scope of the study, followed by presenting a synoptic view of the problem of sickness. To enthuse respondents to come-up with true and complete information about the different aspects of the problem, the researcher before conducting formal interview used to educate the respondents about the serious consequences of the problem of sickness and also assuring them that the information provided by them will be used confidentially and at no point of time, their identity will be disclosed. To control the falseness of the responses, there were some inbuilt checks in the questionnaire. To the illiterate entrepreneurs, the technical aspects were explained in common parlance. Footnote explanations to technical concepts were given in the schedule. Further, every questionnaire was attached with a covering letter, highlighting the purpose of the study and interview.

In addition to questionnaire interviewing, informal discussions were also held with the prominent entrepreneurs and experts in the field and which were recorded in a cassette player and which in the final analysis has proved of great help. As a follow-up measure, the researcher after analysing the collected data, has once again approached to some respondents to discuss emerging conclusions and also to seek clarifications with regard to some ambiguities arising after analysis.

PROCESSING AND ANALYSIS OF DATA

The data collected from primary and secondary sources has been edited, coded, categorised and transcribed and thereafter summarized and arranged in logical order. In the process, certain errors and omissions were detected and subsequently corrected. The content analysis also has been made for inferring characteristics, causes and to draw a comparative analysis of various levels of communication through a process of conversion of recorded ‘raw’ phenomenon into data. Tabulation was done both manually and
mechanically. The statistical analysis of data has been done also with the help of 'SPS Statistical Package' through a computer.

The collected data so arranged has been critically scanned with the help of relevant statistical tools to determine inherent facts. Besides absolute numbers, the method of percentage, comparisons, cumulative growth rates, index numbers, trend values were applied. Some advanced statistical tools like rank order correlation coefficients, T tests have also been used to deduce about the association in perception of diverse groups of respondents regarding the causes of sickness and the role failures.

CODIFICATION

To ensure the confidentiality, the units selected to study the percentage gaps in working capital, raw materials, cost over-runs etc. have been mentioned in coded letters, such as, X, Y and Z.

RESEARCHER'S BIAS

Social scientists are part and parcel of the study. The social researchers do have values and biases which if allowed to interfere can impinge upon the final conclusions. It is a fact, that a pre-conceived mind remains analysed with personal beliefs and notions. Given this fact, the scholar has remained unbiased throughout the study period. Pre-conceived ideas were not allowed to interfere in the impartial investigation. The researcher has attempted to remain open minded right from the point of formulation of questionnaire to the analysis and interpretation stage of the study. However, things were not taken at a face value but investigated thoroughly for real answers to the problems. During interviews, evaluation of responses were avoided. To control the biases of the respondents, the questionnaires were set in a way that will detect the motivated responses on the part of a respondent itself.

LIMITATIONS TO THE STUDY

Researchers usually face many constraints in the study of small scale industries because of being dispersed over a wide geographical area and mostly run by persons with a moderate level of education. Study under unique state setting which is characterised by
human, administrative and political distortions further adds to the problem of studying small scale industries. During the course of the present study, the author faced many problems which have been overcome to the desired level, however, proved very cumbersome and time consuming. Following are the main limitations to the study.

1. The main difficulty faced in the study was due to the weak data base of the small scale industrial sector in the state. The data about the number of small scale sick units, etc. is totally missing in the state. To identify the sick small scale units, the researcher at its own has conducted a diagnostic survey to find the sick units. However, it was not possible for the individual researcher to conduct diagnostic study of all the industrial units. It may be stated here that the diagnostic study has been conducted almost in all the industrial estates where the majority of the modern small scale units are located.

2. Observation of things is as important as opinion survey. The author did observe the management practices of some small scale units and also discussed in detail the practices employed by them. However, due to paucity of time, the scholar could not observe the working pattern of many of the units and very closely.

3. Non-cooperation by some entrepreneurs and officials of promotional agencies in providing information also has crept in some limitation into the study. It was very hard to get time from the entrepreneurs for personal interviews. The scholar could not contact some of the entrepreneurs of sick units as they have closed down their units and shifted to other parts of the country. Most of the officials of the promotional agencies were unwilling to fill-up the questionnaires for the reasons best known to them. However, after repeated requests and clarifications about the purpose of the study, most of them filled-up the questionnaires. Over-all, the respondents except few, were not co-operative and forth-coming but the scholar left no stone unturned to get the desired information from them and was nearly successful in his endeavours.

4. The investigation into the problem of industrial sickness necessitated to go from one part of the state to another to meet diverse people. Although the scholar visited most of the places and meet diverse sections of the universe, yet could not cover whole geographical area for the study.