This chapter provides the track to be followed in order to complete the research study.
The previous chapter dealt with the study of the available literature. On reviewing this literature, it appears that the different studies on Human Research Development and the implementation aspect of the various labour laws carried out in India present a little by little description of its variety dimensions. The endeavours made so far by numerous eminent researchers encompass one or the other aspects on the subject. A study linked with the theme of actual implementation of labour laws in different industries in respect of the State of Himachal Pradesh has not been carried out till date. The present study can be well thought-out as one among the many bricks that will be vital to bridge the space between research requirements and research efforts made so far.

Research Design is the basis which helps to explore the existing research gap and provides valuable information to frame the need, scope and objectives of the present study. Further this may provide help in designing the methodologies, analytical tools, etc. along with the methodological weaknesses, if any. Consequently, it facilitates in carrying out the research plan effectively and provides with the empirical and logical basis for drawing conclusions. In this chapter, the need, scope, objectives, methodology, instruments of data collection, tools of analysis, hypothesis, sampling and limitations of the study are presented. These discussions will definitely provide the track to be followed to complete the research project.

3.1 NEED OF THE STUDY:

The workforce in Himachal Pradesh is increasing manifold and the expectations from the industries have augmented to a great deal. The only practicable and feasible way out which can sustain anticipated results is the appropriate management of human resource potential. Being the fastest growing and promising sector, staffed with a great number of employees, the industries are bound to have suitable personnel policies and practices. It is imperative that there should be sound personnel policies and practices in the industries so that it is capable of recruiting and training the best talent for the jobs. But an element of inefficiency is creeping in slowly. It seems that there is a growing sense of dissatisfaction among the rank and file in the industries in respect of its personnel policies and practices. Sporadic attempts are not succeeding during the last few decades.
Keeping in view the importance of industries in developing the rural and urban areas of Himachal Pradesh and the important area of human factor in them, the present area of research is selected. An attempt is made to study comprehensively the objectivity of human factor which ultimately influences the significant image of these industries. The study undertaken is of great relevance to the workers, employers, government and the society at large. There is a need to acquire first hand information and knowledge about the rules, regulations and policies that are supposed to be implemented by the factories, their non-implementation being the cause for the problems being faced by the industrial workers. The problems being faced by the industrial workers is inquired into and this has made it convenient to arrive at appropriate solutions or to suggest remedial measures.

One of the main reasons for undertaking this study is the fact that till date not much work has been done in the field of actual implementation of labour laws in respect of the State of Himachal Pradesh. Literature relating to work done in field of HRD is in abundance at the national level. Yet the implementation aspects of the labour laws and its effect on the development of human resource have so far been dealt with scantily.

The suggestions and recommendations that are made on the basis of empirical research are also of some help to the Management of Factories and the Government of the State. The ‘Law Makers’ can obtain benefit from this study to re-orient their accepted wisdom and turn away from their biases and discriminations. The study will encourage the employees and the trade unions to observe the things in the appropriate angle. Further, this study is an attribute to the cumulative existing literature in the respective field which will certainly prove to be of help in providing a path and serve as a guide to the researchers in future.

3.2 STATEMENT OF THE PROBLEM:

The present study focuses on the development pattern of human resources that emerged as a result of industrialization process in Himachal Pradesh. The problem is titled as below:

“INDUSTRIALISATION & HUMAN RESOURCE DEVELOPMENT: An Emerging Pattern in Himachal Pradesh.”
3.3 SCOPE OF THE STUDY:

The present study aims to examine whether the industrial units in Himachal Pradesh are implementing the rules and regulations in respect of human resources employed with them so as to provide a ground for their development and satisfaction. With the beginning of the economic liberalization era starting from the year 1991, the Indian economy has dramatically grown from near zero level to one of the world’s fastest growing economy. Growing markets have given rise to umpteen new opportunities for Indian entrepreneurs, thereby providing much required employment opportunities to the qualified but unemployed masses of India. Today the whole world is eyeing India as a biggest emerging market.

Himachal Pradesh is one of the most rapidly emerging industrial states of the country. The Govt. of Himachal Pradesh has given attractive incentives, concessions and facilities to different industries being set up in the State. The government had hoped that the industries set up here would provide the much needed impetus to the industrialization of the State, which was otherwise on a low level in the past. The motive of the government behind this was to generate new employment opportunities to the people of the State as well as to tap new sources of revenue in the form license fees, taxes, etc. This has also led to entry of corporate houses in the field of horticulture, floriculture, etc., thereby enhancing the income of rural people by providing them a way to market their products to far off markets. This necessitates the need of proper and efficient industrial policy as well as requisites safeguards to protect the interest of the State and the workers in general. As the industrial sector is on the way to become a key sector of the economy, it has been felt proper and appropriate to conduct an empirical study of the different industries in Himachal Pradesh and to find out whether the human resources working in these industries are being developed as visualized by the government of the State.

Human Resource Development covers wide variables making it difficult to study each and every aspect of HRD. Hence the scope of the study has been focused towards few parameters such as Compensation and Work Schedule, Maintenance of Work Environment, Industrial Relations and Development of Employees along with training, promotion and performance appraisal. The scope of the study has also been confirmed to the registered industrial units in the Large and Medium Sector employing 43,232 workers in 356 units as of
March 31, 2007 making it 121 workers per unit. Registered industrial units in the micro & small scale sector employing 1,41,067 workers in 33,618 units as of July 31, 2007 making it 4 workers per unit have been excluded as they fail to fall within the purview of the various labour laws due to the small number of workers employed by them. The time period for collecting the data related to the study has been from July 2008 to January 2009.

3.4 OBJECTIVES OF THE STUDY:

The present study has been conducted with a view to throw light on the development pattern of human resources that emerged as a result of industrialization process in Himachal Pradesh. This objective has been achieved with the help of the following sub-objectives spelt out as under:

1. To study the personnel policies of the industries that is set up in the State of Himachal Pradesh.
2. To examine the actual implementation of the government rules, regulations and policies in respect of human resources in various industries in Himachal Pradesh.
3. To verify whether the policies put into practice by the employers have led to the development of human resources.
4. To evaluate the level of satisfaction and perception of the employees towards the attitude of the management with regard to different HRD mechanisms.

3.5 HYPOTHESIS:

While conducting research, one cannot think of proceeding further in total ignorance and lack of research knowledge. The researcher must have some vision about the new facets that are likely to be revealed. This makes easier for one to proceed further to find out whether the ideas visualized are true or not. According to the Merriam Webster's Dictionary, hypothesis is a tentative assumption made in order to draw out and test logical or empirical consequences. Without any appropriate or suitable hypothesis, a lot of time and labour is wasted in fruitless research. Hence, in the light of the overall objectives of the study and after reviewing the existing literature on the subject, the following hypotheses have been developed for the purpose of testing:
1  **Null Hypothesis** $H_0$: There is no significant difference in the implementation of the rules, regulations, etc. as laid down by the government.

**Alternative Hypothesis** $H_a$: There is significant difference in the implementation of the rules, regulations, etc. as laid down by the government.

2  **Null Hypothesis** $H_0$: There is no development of human resources as a result of the policies put into practice by the employers.

**Alternative Hypothesis** $H_a$: There is significant development of human resources as a result of policies practiced by the employers.

3  **Null Hypothesis** $H_0$: There is no difference in the satisfaction of the employees working in different industries with respect to the different HRD mechanisms.

**Alternative Hypothesis** $H_a$: There is significant difference in the satisfaction of the employees working in different industries with respect to the different HRD mechanisms.

### 3.6  **Research Methodology:**

Research methodology is a plan according to which observations are made and data is collected. It provides the empirical and logical basis for drawing conclusion and gaining knowledge. The application of correct method and the adoption of the scientific form of mind are the essential requirements of a scientific study. Keeping the said assumption in view, methodology of data collection and analysis of data has been discussed in the forthcoming pages.

#### 3.6.1  **Source of Data:**

The objectives as stated previously have been accomplished by making use of primary data to a large extent along with some secondary data. The present study has been for the most part a primary probe based on the sample survey of the employees working in different industrial units with the help of the questionnaire/schedule. The details of each of these have been as follows.

A  **Secondary Data:**

In order to study the development of industrial areas and industrial estates within the different districts of the State of Himachal Pradesh, district wise concentration of the different industries, year and district wise details of
the industrial units, amount of investment and the number of persons employed, etc., the secondary sources have been used. They have been used to get a picture about the industrial units under study. The secondary data has been collected from various sources, namely office records, published and unpublished documents, various acts, rules, etc. These have been mainly gathered from the following:

1. Department of Industries, Shimla.
3. Different industrial units under study.
5. Website of different industrial units under study.
7. Existing literature and other scholarly work.
8. Various magazines, journals and books.

B Primary Data:

Primary data has been used to study the employees' perception towards the various HRD mechanisms and to examine the implementation of the various rules, regulations, acts, etc. It has been collected with the help of questionnaire filled in by the employees and through administration of schedule. These employees are the human resources that work in different large and medium scale industrial units that fall within the region of study. Pilot Study has been conducted to observe the need to make changes to the questionnaire/schedule. Informal discussions have been carried out with the employees to comprehend closely about their inner feelings and problems. Personal observations made during the course of the study have been included in primary data. The details of each of these have been presented in the paragraphs to be followed:

1. Questionnaire:

The most important primary data has been collected with the assistance of questionnaire to be filled up by the respondents or by administration of schedule to the employees employed with the industrial units in the private sector in the State of Himachal Pradesh. Data has been collected to study the employees' perception towards the level of their satisfaction and to find out whether the steps undertaken by the employers for the development of their employees have been in accordance with the labour laws or not. Following have been the highlights of the questionnaire/schedule:

[82]
So as to acquaint ourselves with the demographic profile of the sample employees under study, data in respect of the following has been collected from the respondents:

- Age, sex, domicile status and educational qualifications.
- Details of their current job such as length of service, department, designation, nature of appointment, skill level and nature of work.
- Factors that motivated them to join their present employer.
- Level of awareness regarding the different labour laws.

With the intention of studying the impact of compensation and benefit package in its present condition and the work schedule of the employees, the respondents have been asked questions relating to the following:

- Payment of wages, bonus and provident fund.
- Leave facilities.
- Level of satisfaction towards various monetary benefits.
- The work schedule of the employees.

To facilitate the study in respect of provisions made by the employers relating to the working conditions, questions with respect to the following have been incorporated in the questionnaire:

- Level of satisfaction towards health measures, statutory welfare amenities and safety devices.
- Suggestions for overcoming health hazards.
- Measures taken by the employers in case of death, accident and acute illness of the bread earner.
- Uniform of the employees.

With the aim of assessing the position of industrial relations in its present form, questions with reference to the following topics have been put to the respondents:

- Unfair labour practices on the part of the employers.
- Trade union.
- Joint Management Council.
- Inter-personal relations.

In order to study the extent of development of employees, questions related to the subsequent areas have been taken into account in the feedback form:

- Performance appraisal.
- Promotion.
Chapter 3

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- Training.
- Employees' perception towards job and HRD parameters.

With the rationale of analyzing the perception of the employees as regards the satisfaction from various HRD variables, the questions that have been put to the respondents have been related to the following topics:

- Compensation and work schedule.
- Maintenance of work environment.
- Industrial relations.
- Development of the employees.

2  Pilot Study:

The industrial units in the district of Bilaspur have been selected for conducting the preliminary survey. Pilot study has been undertaken so as to pre-test the questionnaire/schedule and to refine it for use in the final study. This helped in making certain changes in the questionnaire/schedule so as to make it easier for the respondents to provide their responses. The study also gave an indication as to the kind of responses that would be forthcoming with a few deletions and additions in the final questionnaire/schedule. The Table 3.1 gives the details of the units selected for the purpose of the pilot study:

<table>
<thead>
<tr>
<th>SR. NO.</th>
<th>NAME OF THE UNIT</th>
<th>NO. OF EMPLOYEES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ACC., Barmana</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>KOAL Dam, Harnoda</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>10</td>
</tr>
</tbody>
</table>

3  Informal Discussions:

With the intention of being acquainted with the ground reality in a better way, personal visits to the industrial units have been made. Interviews with the authorities have been carried out. To obtain first hand information and to comprehend closely the inner feelings and problems, informal discussions have been made with the employees during their lunch break and after the working hours. This helped in cross examining the responses given by the respondents in the questionnaire/schedule and getting hold of some additional and relevant information related to the present study. Informal discussions have also been held with some of the officials from the Department of Industries, Shimla and Department of Labour and Welfare, Shimla.
4 **Personal Observations:**

Certain information cannot be obtained through questionnaire/schedule and personal interviews. The same has been obtained by means of direct personal observations made during the course of visits to the industrial units. Sometimes, the respondents do not disclose the answers to many questions honestly. In such cases, observations from a close angle of the ground realities help to solve the problem logically and scientifically. This technique has been by and large helpful in studying the working environment and the interpersonal behavior of the employees within the manufacturing units.

3.6.2. **ANALYSIS AND INTERPRETATION OF DATA:**

For accomplishing the objectives of the study, the data drawn from the primary source has been classified and tabulated in one or more forms according to the requirement of analysis. Moreover, there can be many interpretations and explanations to the data collected. The present study makes available the elucidation as has been understood by the researcher only. The information collected has been analyzed and interpreted with the help of the following methods:

A Mathematical Methods
B Statistical Methods
C Diagrammatic and Graphic Methods

A **Mathematical Methods:**

In the present study, the data collected has been analyzed with the help of mathematical tools. Tools such as simple average and percentage have been used as per the requirement of the study.

1 **EFFECTIVE PERCENTAGE:**

Effective percentage has been used to study the attitude of the employees towards the effectiveness of the different parameters of Human Resource Development. The scores given by the respondents for each parameter has been totaled unit and industry wise. Analysis has been done parameter wise and shows comparison between the different units and industries. The formula used for calculating effective percentage of each parameter unit wise and industry wise is as follows:

\[
\text{Effective Percentage} = \left( \frac{\text{Total score of responses}}{\text{Maximum score}} \right) \times 100
\]
B Statistical Methods:

Statistical methods make available necessary and indispensable tools for collecting, organizing, analyzing and interpreting the information expressed in numerical terms. The statistical methods used have been as follows:

1. Descriptive Statistical Measures
2. Non-Parametric Tests

1 DESCRIPTIVE STATISTICAL MEASURES:

These are used to explain the characteristics of the sample taken from the population in totality. They limit generalization to the particular group of individuals observed/studied. The statistical analysis based on the computation of descriptive statistical measures is by and large applied in action research and endows with precious information with reference to the nature of the particular group and that group only. Following descriptive statistical techniques have been employed in the present study.

Measure of Central Tendency or Averages:

The one single value that describes the characteristics of the entire mass of unwieldy data is called the central value or an 'average'. The measures of central tendency used in the present study are arithmetic mean and mode.

Arithmetic Mean:

Arithmetic mean has been used to observe the employees perception towards the extent of satisfaction with respect to monetary benefits, health measures, statutory welfare amenities and HRD variables. In addition, it has been used to analyze the employees' perception regarding their awareness about the labour laws; significance of performance appraisal, promotion and training; extent of development through HRD parameters, etc. It is the most popular and widely used measure of representing the entire data by one value. It can be defined as the value which is derived by dividing the total of the values of various given items in a series by the total number of items. The formula for computing the simple mean is as follows:

\[
\bar{X} = \frac{\sum fX}{N}
\]

where,

\(\bar{X}\) = Arithmetic mean

\(f\) = Frequency

\(X\) = The variable in question

\(N\) = Total number of observations
Mode:

The mode or the modal value is that value in a series of observations which occurs with the greatest frequency. It is the value which has the peak frequency density in its immediate neighbourhood area. In the present study, mode has been calculated by inspection and/or grouping method and has been used to compute coefficient of skewness.

Measure of Dispersion or Variability:

Dispersion measures the extent to which the items vary from the central value. Since they give an average of the differences of various items from an average, they are called averages of the second order. The methods of studying variation used in the present study have been standard deviation and coefficient of variation.

Standard Deviation:

Standard deviation has been used to find out the absolute dispersion in the employees perception towards the extent of satisfaction with respect to monetary benefits, health measures, statutory welfare amenities and HRD variables. It has also been used to analyze the responses of the employees regarding their awareness about the labour laws; significance of performance appraisal, promotion and training; extent of development through HRD parameters, etc.

It is the most important and widely used measure of studying dispersion. It is also known as root mean square deviation for the reason that it is the square root of the mean of the squared deviations from the arithmetic mean. It measures the absolute dispersion. Large amount of dispersion or greater value of standard deviation denotes greater magnitude of the deviations of the values from their mean and vice versa. The formula for computing standard deviation is as follows:

$$\sigma = \sqrt{\frac{\sum f x^2}{N}}$$

where,  
\(\sigma = \) Standard deviation  
\(f = \) Frequency  
\(x = (x - \bar{x})\) i.e. deviations of the items from the mean  
\(N = \) Total number of observations
Coefficient of Variation:

With the intention to find out the relative variation in the employees perception towards the extent of satisfaction with respect to monetary benefits, health measures, statutory welfare amenities and HRD variables, coefficient of variation has been used. Besides this, it has been used to examine the responses of the employees regarding their awareness about the labour laws; significance of performance appraisal, promotion and training; extent of development through HRD parameters, etc.

When the relative dispersion is stated in terms of the arithmetic mean and the standard deviation, the resulting percentage is known as the coefficient of 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 and vice versa. The formula for computing coefficient of variation is as follows:

\[ C.V. = \frac{\sigma}{\bar{X}} \times 100 \]

where, \( C.V. \) = Coefficient of variation
\( \sigma \) = Standard deviation
\( \bar{X} \) = Arithmetic mean

Measure of Skewness or Asymmetry:

Measure of skewness tells about the direction and the extent of asymmetry in a series, and permits the comparison of two or more series either in absolute terms or in relative terms. In a symmetrical distribution the mean, median and the mode are identical. The more the mean moves away from the mode, the larger is the asymmetry or skewness. In the present study, skewness has been calculated by means of Karl Pearson's Coefficient of Skewness.

Karl Pearson's Coefficient of Skewness:

It has been used to study the direction (either towards the lower side of mean score or towards the higher side of the mean score) and the extent of asymmetry in the responses of the employees for each individual item of employees perception towards satisfaction, awareness or development, as the case may be.

Skewness is a measure of asymmetry and shows the manner in which the items are clustered around the average. In a symmetrical distribution, the values of mean, median and mode coincide. The items show a perfect balance
on either side of the mode. But in a skewed distribution, the mean and the median fall at different points and the balance or centre of gravity is shifted either to the right side or the left side. The amount by which the balance exceeds on one side measures the skewness of the series. In case of positive skewness, we have mode < median < mean and in case of negative skewness, we have mean < median < mode. The formula of Karl Pearson’s coefficient of skewness has been presented below:

$$Sk_p = \frac{Mean - Mode}{Standard\ Deviation}$$

where, $Sk_p$ = Karl Pearson’s coefficient of skewness

In practice, the value given by this formula is rarely very high and usually lies between ±1. When a distribution is symmetrical, the coefficient of skewness is zero. The coefficient of skewness will have a plus sign if the distribution is positively skewed and will have a minus sign if the distribution is negatively skewed.

**Association of Attributes:**

The method of association of attributes has been employed to measure the degree of relationship between two variables whose size cannot be measured in quantitative terms and where only the presence or absence of a particular attribute can be determined. For the purpose of the present study, the method followed for ascertaining the association between two attributes has been Yule’s Coefficient of Association.

**Yule’s Coefficient of Association:**

Yule’s Coefficient of Association has been used to study the association of the variables like designation and domicile status with gender, marital status, nature of appointment, feeling better off than class fellows, provision of advance increment for efficiency, availability of provident fund number, disclosure of statement related to provident fund balance, nature of work timings, frequent change in working hours, working on part-time basis, working days in a week, presence of health hazards, requirement to wear uniform, evaluation of performance, management’s role in promotion, provision of training, arrangement of training at training school, feeling handicapped in the absence of training, etc.

It is the most popular method of studying association as it not only determines the nature of association but also the extent to which the two
attributes are associated. The formula for obtaining the Yule's Coefficient of Association is as follows:

\[ Q = \frac{(AB)(\alpha\beta) - (A\beta)(\alpha B)}{(AB)(\alpha\beta) + (A\beta)(\alpha B)} \]

where,
- \( Q \) = Yule's Coefficient of Association
- \( A \) = Presence of attribute no. 1
- \( B \) = Presence of attribute no. 2
- \( \alpha \) = Absence of attribute no. 1
- \( \beta \) = Absence of attribute no. 2

The value of this coefficient lies between +1 and -1. When the value of \( Q \) is +1, there is perfect positive association between the attributes. When the value of \( Q \) is -1, there is perfect negative association between the attributes and when the value of \( Q \) is 0, the two attributes are independent.

2 NON-PARAMETRIC TESTS:

In non-parametric tests, no assumptions about the population from which the samples are drawn are made. Originated in sociological and psychological research, non-parametric tests today are very popular in behavioral sciences. The test used in the present research has been Chi-square Test.

**Chi-square Test:**

The Chi-square test of independence and goodness of fit has been used (as per the need of the research) to study the relationship between employee's satisfaction and various monetary benefits, health measures, statutory welfare amenities, different HRD variables, etc. Moreover, it has also been used to study the relationship between views of employees in respect of awareness about the labour laws; significance of performance appraisal, promotion and training; extent of development through HRD parameters, etc.

The Chi-square test is one of the simplest and most widely used non-parametric tests in statistical work. It describes the magnitude of the difference between the observed frequencies and the expected frequencies under certain assumptions. It is used to estimate the likelihood that some factors other than chance account for the observed relationship. Since the null hypothesis states that there is no relationship between the variables under study, the chi-square test merely evolutes the probability that the observed relationship resulted from chance factor. The equation for chi-square is as follows:

\[ \chi^2 = \sum \frac{(O - E)^2}{E} \]
where, \[ \chi^2 = \text{Chi-square} \]
\[ O = \text{Observed frequency} \]
\[ E = \text{Expected frequency} \]

C Diagrammatic and Graphic Methods:

The data collected has been analyzed as per the requirement of the study with the help of charts such as column chart (clustered cylinder), pie chart (exploded), etc.

➢ Ranking Scale:

In the present study, Ranking Scale has been used to study the personal and the non-personal factors that motivated the employees to join their present-day employer; the different suggestions for overcoming health hazards; the internal and the external factors that count for promotion.

Ranking scale has been converted into interval scale and composite standard method has been used. This method gives an idea about the weightage of each factor. Rank order has been given according to the total number of preferences for each factor. Interval scale has been developed from the ordinal data by adopting the following steps:

1. The column mean is calculated and shown in the Mp row. The formula for calculating the column mean is as follows:
\[ Mp = \frac{C + 0.5(N)}{nN} \]
where,
\[ M_p = \text{Mean proportion of the columns} \]
\[ C = \text{The total number of choices for a given suggestion} \]
\[ N = \text{Number of items in the sample} \]
\[ n = \text{Number of factors} \]

2. The \( Z \) values for the \( M_p \) row are secured from the tables giving the area under the normal curve and are shown in the \( Z_j \) row.
   If \( M_p < 0.5 \), the value of \( Z \) will be negative
   If \( M_p > 0.5 \), the value of \( Z \) will be positive

3. As \( Z_j \) values represent an interval scale, zero will be arbitrary value. Negative scale values are eliminated by giving the value of zero to the lowest values. The absolute value of this lowest scale value is added to all the other scale items. The scale in the \( R_j \) row is obtained.

4. The interval scale derived is shown graphically.
3.7 SAMPLING:

Due to the applicability of the Himachal Pradesh Factory Rules, Trade Union’s Act 1926, Payment of Wages Act 1936, Industrial Disputes Act 1947, Factories Act 1948, Maternity Benefit Act 1961, Payment of Bonus Act 1965, Contract Labour (Regulation and Abolition) Act 1970, Payment of Gratuity Act 1972, etc., the nature and functioning of all the 356 large and medium scale industrial units set up in the State of Himachal Pradesh and the management of their personnel is almost similar. Also due to its geographical features, it is difficult to study all the registered large and medium sector industries situated in Himachal Pradesh and to interview all the employees working in them. Hence keeping in view these facts, it has been considered necessary to choose a sample that is representative of the population. The procedure adopted for sampling in research study normally depends upon the objectives of the study. But the effort, cost and time required for carrying out the study has also been considered in determining the size of the sample.

Table 3.2 - Industry wise size of the sample selected for study

<table>
<thead>
<tr>
<th>SR. NO.</th>
<th>NAME OF INDUSTRIES</th>
<th>SOLAN</th>
<th>SIRMOUR</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Units</td>
<td>Employees</td>
<td>Units</td>
</tr>
<tr>
<td>1</td>
<td>Food Products</td>
<td>2</td>
<td>50</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Textile/Spinning</td>
<td>2</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>Chemical &amp; chemical products</td>
<td>3</td>
<td>75</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Electronics</td>
<td>3</td>
<td>75</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>Steel &amp; steel products</td>
<td>3</td>
<td>75</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>Paper &amp; paper products</td>
<td>1</td>
<td>25</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Cement</td>
<td>1</td>
<td>25</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>15</td>
<td>375</td>
<td>5</td>
</tr>
</tbody>
</table>

Population:

The population for the study consists of the following:

- 13 industries in the manufacturing sector.
- 356 registered Large and Medium scale industrial units located in Himachal Pradesh as on March 31, 2007.
- The 12 districts in the State of Himachal Pradesh.
**Sampling Procedure:**

The procedure followed in order to form a sample that is representative of the population has been along the following lines:

- The Manufacturing Sector enjoys a large share in the economy. Out of 13 main industries in the Manufacturing Sector, 7 industries namely Food Products, Textile/Spinning, Chemical, Electronics, Steel, Paper and Cement have been selected as majority of the industrial units belong to one or the other of these 7 industries.

- Out of the total 356 registered Large and Medium scale industrial units set up in Himachal Pradesh approximately 5 percent i.e. 20 units have been considered for carrying out the present study. The industrial units have been selected at random from the list of large and medium scale units obtained from the Department of Industries in the concerned Industrial Area.

- The manufacturing units established in the districts of Solan and Sirmour have been chosen as Solan has attracted 242 industrial units i.e. nearly 68 percent of the total units followed by the district of Sirmour with 77 industrial units i.e. nearly 22 percent. 15 and 5 industrial units from Solan and Sirmour districts respectively have been included according to their relative proportion. The number of industrial units from each industry and from the 2 districts under study has been selected as per their relative strength in the population.

- 43,232 persons have been employed by 356 industrial units as on March 31, 2007 making it 121 employees per manufacturing unit. About 20 percent of the average recruits i.e. 25 employees from each unit have been chosen. In this manner, the total size of the sample comes to 500 employees (20 industrial units × 25 employees per unit). Judgment sampling has been applied for filling in the questionnaire and for administering the schedule so as to give due representation for sex, department, etc.

### 3.8 LIMITATIONS OF THE STUDY:

To be aware of the extent of the reliability of the study, it is important to state the limitations under which it has been carried out. The main limitations of the present study have been as follows:
The study has been accomplished with the help of primary data which is collected at random. For that reason, the results are likely to be affected by the sampling errors.

The study has also been carried out with the help of the secondary data collected from various sources. The limitations of these data add to the limitation of this study.

Collecting first hand information from the sample employees of 20 industrial units under study was a difficult and time consuming activity mainly on account of geographic location of these units.

Majority of the respondents were initially hesitant and unwilling to disclose the performance and weak points of their employers in the course of opinion survey carried out by means of questionnaire and informal discussion.

Incomplete and wrong information and non-responses to some questions could not be avoided. This involved extra efforts to sort out the relevant respondent and receiving the incomplete and/or wrongly filled questionnaires filled up again.

The personnel departments of many industrial units afforded full cooperation in their best possible manner. But in case of some industrial units, the personnel departments were found to be reluctant to let the non-managerial employees fill up the questionnaires.

Furthermore, time and cost factors resulted in keeping the scope of the study limited.