CHAPTER 4
RESEARCH METHODOLOGY

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CHAPTER 4
RESEARCH METHODOLOGY

4.1. Introduction:
Research Methodology is a primary need of any research and plays a pivotal role in it. It is a blueprint of a research. Hence planning of a research work in advance is done to carry out this research work systematically.

In this chapter the researcher has described the research methodology used for this thesis. This chapter gives detailed information about the objectives of the study, hypotheses, scope of the study, research design, research methods that are used, selection of samples, details about collection of primary and secondary data used for this thesis.

The topic for the research study approved by Tilak Maharashtra Vidyapeeth is “A Study of Attrition Problem in Select Large Scale Automobile Industries in and around Pune 2008-2012”
Note: The researcher has covered most of the passenger car manufacturing Automobile Industries located in Pune District.

4.2. The problem statement
The Automobile sector is called as a sunrise sector of India. The success of an organization depends on stable and competitive work force. There are many problems of Automobile industries such as absenteeism, trade unionism, employee attrition, retention of skilled employees etc. It can be seen from the Government reports and review of literature that employee attrition is one of the major problems faced by the automobile industries. It hampers the flow of production, quality of product, spoils image and development and growth of an organization. Large amount of funds spent on recruitment, interview, training and development of an employee. When an employee leaves an organization it is a big loss for an organization because the cost involved in these activities are also lost. They also carry tacit knowledge, secrets, plans and strategies with them which are useful for the competitors. Hence finding out
the root cause of employee attrition is very important for the success of an organization.

4.3. Aim of the study
This researcher keeps the fact in mind that the employment scenario is constantly changing day by day and upcoming with new plans and policies to reduce attrition by retaining talented employees because these employees are one of the sources to gain a competitive advantage. Now a days it has become very important for an industry to come out from its old traditional shell and get a vast picture of the changing environment, to identify the current gaps, the problems and to fill up these gaps.

The study aims at identifying key issues in the area of attrition problem at the managerial level in the automobile industry particularly in the car manufacturing companies in Pune and to get an inner view of the problems of managers and recommend solutions accordingly. Thus it becomes very significant for an industry to find out ways and means to reduce attrition at the managerial level.

4.4. Objectives of the study
- To study the present status of employee attrition at managerial level in the automobile industry with special reference to Passenger car manufacturing companies in and around Pune district.
- To know the issues related to employee attrition among the top, middle and lower level managers in passenger car manufacturing companies.
- To give suggestions and recommendations to organizations to control their attrition rate.
- To test the hypothesis stated below.

4.5. Research questions
This research will investigate the causes of employee attrition in passenger car manufacturing automobile companies in and around Pune city.

This research aims to answer the following research questions
- What is the present status of employee attrition at managerial level in automobile industries in Pune district with special reference to passenger car manufacturing industries?
4.6. Statement of Hypothesis
This study is conducted to test the following hypothesis:
1. \( H_0 \) : There is no difference in the importance attached to the causes of employee attrition.
\( H_1 \) : There is a significant difference in the importance attached to the causes of employee attrition.

2. \( H_0 \) : There is no relationship between Performance Appraisal and employee attrition.
\( H_1 \) : There is a significant relationship between Performance Appraisal and employee attrition.

3. \( H_0 \) : Organization culture factors do not influence employee attrition.
\( H_1 \) : At least one of the factors of organizational culture has significant impact on employee attrition.

4.7. Assumptions of the study
- All selected companies have their separate retention policy.
- All selected companies take efforts for reducing attrition.

4.8. Research Design
The present study is a ‘descriptive research’. It is an empirical study. The researcher collected information from the respondents for fulfilling the objectives of the study and test the hypothesis. Data is collected by using questionnaire and conducting personal interviews with managers of passenger car manufacturing industries. The collected data is systematically tabulated, analyzed and presented in a systematic way.

Justification
Descriptive research studies are those studies which are concerned with describing the characteristics of a particular or a group. The researcher has described the reason and
effects of attrition in the automobile industry in and around Pune. Descriptive research includes survey using a questionnaire and fact finding methods of different kinds. The major purpose of descriptive research is to give a description of the state of affairs as it exists at the time of the survey.\(^1\)

4.9. Sources of data

4.9.1. Source List:

Names of the companies are collected from the Maratha Chamber of Commerce and through internet.

Justification: Maratha Chamber of Commerce industries and agriculture Pune and District Industrial centre is the source from where the researcher has collected the list of automobile companies located in and around Pune District. Names of the companies are also collected from the internet.

4.9.2. Tools of collecting information

Tools for collecting the information are questionnaire and personal interviews.

This study is carried out for finding out the attrition among managers in passenger car manufacturing automobile industries in and around Pune district.

4.10. Collection of Data

The primary and secondary data required for the study is collected systematically.

Sources of Data

<table>
<thead>
<tr>
<th>Primary data</th>
<th>Secondary data</th>
</tr>
</thead>
<tbody>
<tr>
<td>(I) Questionnaire:</td>
<td>Reference books.</td>
</tr>
<tr>
<td>A) Pilot Survey</td>
<td></td>
</tr>
<tr>
<td>B) Main Survey</td>
<td>Articles from Journals, Newspapers and magazines.</td>
</tr>
<tr>
<td>Questionnaire was divided in following sections</td>
<td></td>
</tr>
<tr>
<td>a. Personal information</td>
<td>Reports of Automobile Association of India</td>
</tr>
<tr>
<td>c. Training and development</td>
<td>Different Automobile companies’ websites</td>
</tr>
<tr>
<td>d. Performance appraisal</td>
<td></td>
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<tr>
<td>e. Retention policy and exit interview</td>
<td></td>
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<tr>
<td>f. Causes of attrition</td>
<td></td>
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<tr>
<td>g. Compensation</td>
<td></td>
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<tr>
<td>h. Organizational culture</td>
<td></td>
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<tr>
<td>(II) Personal Interviews</td>
<td></td>
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<tr>
<td>a) During survey</td>
<td></td>
</tr>
<tr>
<td>b) findings Post Survey</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.1: Sources of data
4.10.1. Primary data-

Primary data is collected through questionnaire – a structured questionnaire is prepared consisting of closed ended and open ended questions, personal interviews of managers are conducted by the researcher for collecting the information.

- Questionnaire
- Personal interview

4.10.2. Research Questionnaire:

Pilot study - 16 questions

After conducting pilot study the researcher could observe that to give justification to the objectives and hypothesis framed there was a necessity to include more questions/areas/points in the questionnaire which can certainly result into appropriate conclusion.

Main study - 48 questions

A structured questionnaire was constructed for the main survey consisting of 48 questions. The questionnaire consists of 28 binary questions, 10 multiple questions, 5 rating scale and 5 open ended questions.

Sections

The questionnaire was divided into following sections. Such as

a. Personal information
b. Current trend of attrition in automobile industry in and around Pune
c. Training and development
d. Performance appraisal
e. Retention policy and exit interview
f. Causes of Attrition
g. Compensation
h. Organizational culture
4.10.3. Secondary data
The secondary data has already been collected by someone else and which have already been passed through the statistical process.

Secondary data is collected from:
- Different Automobile companies’ websites.
- Reference books.
- Articles form Journals, Newspapers and magazines.
- Reports of Automobile Association of India.
- Government Publications.
- Statistics collected from various sources.
- Internet.

4.11. Scope of research
Based on the review of literature as well as the other study already made by different organizations and researchers, the researcher observed that taking into account the recent growth of passenger car manufacturing automobile companies in Pune district like Tata Motors, General Motors, Mercedes benz etc. which resulted into recruiting more management graduates as well as engineers at different levels of management cadre in these companies. Due to more attractive pay hike and other factors in the competitive companies the attrition at management level is higher as compared to attrition at the workers level during last 5 years in these companies.

a) Geographical Scope:
The area selected for research is six passenger car manufacturing automobile industries situated in Pune district.

b) Conceptual scope
The study emphasizes on finding out attrition at all three levels (Top level, middle level and lower level managers) in six selected automobile companies. Based on the objectives and review of literature the researcher decided to focus only on attrition problems relating to managerial level.
4.12. Population and Sample

Sample unit for this study-
Only Managers consisting of top level, middle level and lower level

Figure 4.1 Sample units for this study.
Selection of samples
Sample size was determined by using mean method.
Since measurement of the variables were measured by using interval scale (1=not at all, 2= little extent, 4=neutral, 4= to some extent, 5= to great extent)

Population
Population for the study was all managers of car manufacturing automobile companies in and around Pune. Thus managers were classified in three groups consisting of Top level, middle level, and lower level managers.

Based on the information collected from the industries, top level accounts for the 10% of the total population, middle level accounts for the 44.7% of the total population and lower level accounts for the 44.7% of the total population.

Sample size was determined by mean method.

Formula for sample size determination:

\[ n = \frac{(z^2 \times s^2)}{e^2} \]

Where z is the standard score associated with chosen level of confidence (95% in the current case) = 1.96
S is the variability in the data set.
S was computed as a ratio of range derived from the scale upon standard deviation.

Hence S= 5-1/6=4/6=0.666
E is the tolerable error.
7% in the current case .Hence

\[ n = \frac{(z^2 \times s^2)}{e^2} \]

\[ = \frac{(1.96^2 \times 0.66^2)}{0.07^2} \]

\[ = (3.84) (0.435) /0.0049 \]
Population size was 2664. The sample size computed using sample size determination formula produced a square size 3.41. Since 341 is larger than 5% of the population, the population is treated as small population hence finite population correction factor is used to determine the final sample size using the following formula:

$$341 \times \sqrt{\frac{N - n}{N - 1}}$$

$$341 \times \sqrt{2664 - 341/2663}$$

$$341 \times \sqrt{0.87}$$

$$= 0.93 \times 341$$

$$= 318$$

However the researcher covered the more number of managers so as to have maximum coverage. It is 12.75% of the total population.

Total 335 respondents were selected (consisting of 150 lower level managers, 150 middle level and 35 top level managers) from six passenger car manufacturing automobile companies for this study.

4.13. Specify the Sampling Method

Sampling method

For this study Probability sampling method is used.

Justification

Probability sampling is also known as random sampling. Under this sampling design, every item of universe has an equal chance of inclusion in the sample.


The period of research is from November 2011 to May 2014.
4.15. Statistical tools used for analysis of data

The tools used for the analysis of collected data are done by Friedman chi square test, Sign Binomial test and by using SPSS software version 20.

4.16. Limitation of the study.

Since the topic for this research is sensitive one there is a possibility or chance about reliability of the 100% authenticity in replies of few respondents.

4.17. Conclusion

In this chapter the researcher has focused on research methodology used for this thesis. After deciding the research methodology systematically, the researcher visited all the selected automobile companies and collected the data. Raw data is tabulated and systematically represented in the next chapter with the detail interpretation.