Chapter 3
METHODOLOGY
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"Managing retention in simple language is Managing People."

This chapter is discussed under the following headings:

3.1 - Introduction
3.2 - Purpose of the study
3.3 - Specific Objectives of the study
3.4 – Statement of Hypothesis
3.5 - Design of the Questionnaire
3.6 - Pilot Study
3.7 - Selection of Sample
3.8- Collection of Data
3.9 - Analysis of Data
3.10- Limitations of the study
3.1 Introduction

In the Indian scenario, the IT industry is one of the major contributors to the GDP providing the greatest employment potentiality and generating substantial revenue. It faces employee-turnover in the most corrosive form. A planned and pragmatic approach and well designed systems would alone offer an opportunity for ensuring reduction on the loss of talent and its replacement and substantial improvement in the rate of retention.

The NASSCOM-McKensey [58], study projects a shortfall of 500,000 knowledge-workers by 2010. The IT industry is facing problems of plenty but trying to cope with high attrition, high stress and low job satisfaction. In fact, the “war for talent” is heard loudly in all quarters concerned.

3.2 Purpose of the study

Retaining talented employees occupying key positions in the industry is the most serious challenge in today’s customer-market driven employment scenario. Presently, the IT industry has to compete for the best talent with other sectors like telecom, financial, consultancy and retail sectors, which have also been experiencing explosive growth.

Broadly, the study aimed to determine:

a) Whether the IT industry seriously perceives the cost of replacing the lost talent and its consequent impact on the organizational performance?

b) Whether the organizations have conducted any systematic study to ascertain the reasons for employees leaving the organizations?

c) Have any measures been taken to reduce the attrition rate and to improve the retention rate by adopting corrective measures especially through various strategies of rewards, benefits and incentive schemes.
3.3 Specific Objectives of the study

The main purpose of the present study was to find out why employees leave the organization and understand the measures/strategies adopted for employee retention in the IT industry, which experiences the highest rate of attrition in spite of comparative attractive incentive schemes offered regularly to retain the talent.

Therefore the specific objectives of the study were:
1. To study various reasons of employees leaving organizations.
2. To evaluate the effects of attrition on the organization.
3. To understand the measures taken by organization to reduce attrition.
4. To understand why the approaches adopted by IT companies to curb attrition are ineffective.

3.4 Statement of Hypothesis

A hypothesis is a proposition made as a basis of reasoning without the assumption of its truth. Since it is a supposition, it can only be the starting point of an investigation based on known facts and a hypothesis has to be validated empirically. Every Hypothesis can thus be proved or disproved.

For the present study, the following hypotheses were formulated:

a) IT companies based in Pune are facing a problem of increasing attrition.
b) IT companies have a fair understanding of the reasons for employees leaving the companies.
c) IT companies are adopting measures/strategies as approaches to reduce attrition.
d) The measures/strategies adopted as approaches by IT companies to combat the attrition are ineffective.
3.5 Design of the Questionnaire

The questionnaire focused on reasons for attrition and remedial actions initiated by IT companies to retain the talent. Accordingly the researcher used closed/open ended, multiple choice, nominal and ordinal questions. Necessary care was taken to ensure that they were simple, direct, and unambiguous and maintained an appropriate sequence.

The draft questionnaire was designed keeping in view the research objectives. It was reviewed and scrutinized at various stages of discussions with experts.

3.6 Pilot Study

As a part of the pilot study, the questionnaire along with a covering letter explaining therein the purpose of the research study was administered to the HR managers of six organizations. In the light of the experience gained, valuable opinions/suggestions received during the pilot study, the questionnaire was reviewed and edited, technical flaws/inconsistencies were removed making it more comprehensive, compact, meaningful and purposeful. A sample of the final questionnaire is attached in Appendix ‘A’.

3.7 Selection of Sample

A computer list of IT companies based in Pune was obtained from the internet site of Maratha Chamber of Commerce and Industries, Pune. The list, thus taken, had 256 IT companies, which had their offices in Pune. The IT companies were identified covering:

1. Small, medium and large companies
2. IT enabled services companies
3. Product development companies
4. IT product and services companies
Once the questionnaire was finalized, the researcher started establishing contact with HR professionals in the IT companies. Subsequently, a letter was sent explaining the objectives of the present study along with the questionnaire, addressed to HR personnel of 100 IT companies in Pune. There being inherent fear and hesitation on the part of HR professionals to share the information, especially in respect of sharing attrition rate in their organization, the researcher was often required to meet personally and assure that all the information sought would be kept strictly confidential and would be used exclusively for the research study. Besides, it was also suggested that they could take the liberty to contact the researcher to seek any clarification/clear doubts about the content of the questionnaire.

The researcher regularly followed up over the telephone and emails and personal visits continued. Quite often, additional sets of questionnaires were requested as the earlier set of questionnaire was misplaced and it was promptly attended to. Interestingly, a few HR professionals also suggested a few more names of their friends and the researcher promptly followed them up. Many of them, evinced keen interest to offer additional information, discussed certain points and completed the questionnaire beyond office hours.

In all 94 questionnaires were distributed and the researcher was able to get the response from 45 IT companies. Out of the 45 questionnaires, 9 questionnaires were found to be invalid, since they were incomplete in many respects and hence were discarded from the final research. The collection of data pertaining to Pune based companies were only considered though the companies had their offices in other locations other than Pune as well. For the present study, IT enabled services companies, product development companies and IT product and services companies were considered. Thus only 36 companies were retained as sample for the present study.
The sample study bears the following characteristics:
1. Only one questionnaire was obtained from each company.
2. The nature of organization includes small, medium and large companies.
3. They also included IT enabled services, product development and IT product and services companies.
4. The companies also included public and private limited companies.
5. Revenues of the companies varied from Rs.50 crores to more than Rs. 1000 crores.

3.8 Collection of data

Primary Data
This is data which is collected afresh and for the first time, and thus happens to be original in character. Primary data is first hand information collected through various methods such as observation, interviewing, mailing etc. Primary data is directly collected by the researcher from its original sources. The researcher can collect the required data precisely according to his research needs.

For the present study, the primary data was collected through the questionnaire method by distributing and collecting data from the HR personnel of various IT and ITes industries in Pune city. The researcher was proactive enough to spend some time with the respondents before the respondents actually filled up the questionnaire and could gather some information and reactions of the respondents which were very useful for the research as a whole.

Secondary data
These are sources containing data which have been collected and compiled for another purpose. It is data that already exists and does not have to be collected by the researcher. This is data collected by someone else and which have already passed through the statistical process. Other types of written information, such as
company policies, procedures and rules were obtained from the organization’s records and documents for the purpose of study.

This was collected from:

i. Various articles which are published in books, journals, magazines, research papers published in research journals.

ii. Exit documents (Appendix ‘B’).

iii. Charts showing employee attrition from IT companies (Appendix “C”)

iv. Web sites were also picked up as a major source to provide valuable and important data for research and literature review.

3.9 Analysis of Data

1. The field survey and personal interviews techniques have been adopted in elucidating responses.
2. The data collected has been tabulated and presented in the form of tables, charts and graphs.
3. Statistical Package for the Social Sciences (SPSS) software was applied to get the results from the data collected. (Appendix D)
4. Statistical tools like Spearman’s Rank Correlation and Chi-square tests were used to analyze the data. (Appendix D)

**Spearman's rank correlation coefficient or Spearman's rho**

As per Bhattacharya and Dipak Kumar [04], in statistics, **Spearman's rank correlation coefficient** or **Spearman's rho**, named after Charles Spearman and often denoted by the Greek letter ρ (rho) or as $r_s$, is a non-parametric measure of correlation – that is, it assesses how well an arbitrary monotonic function could describe the relationship between two variables, without making any other assumptions about the particular nature of the relationship between the variables.
Certain other measures of correlation are parametric in the sense of being based on possible relationships of a parameterized form, such as a linear relationship.

**Calculation**

In practice, however, a simpler procedure is normally used to calculate \( \rho \). The raw scores are converted to ranks, and the differences \( d_i \) between the ranks of each observation on the two variables are calculated.

If there are no tied ranks, then \( \rho \) is given by:

\[
\rho = \frac{\sum (X_i - Y_i)}{\sqrt{\sum (X_i - \bar{X})^2 \sum (Y_i - \bar{Y})^2}}
\]

where:

\( d_i = X_i - Y_i \) = the difference between the ranks of corresponding values \( X_i \) and \( Y_i \), and

\( n = \) the number of values in each data set (same for both sets).

If tied ranks exist, classic Pearson's correlation coefficient between ranks has to be used instead of the above formula:

\[
\rho = \frac{\sum d_i^2}{n(n-1)}
\]

One has to assign the same rank to each of the equal values. It is an average of their positions in the ascending order of the values:

**Chi-Square tests**

*Chi-square test* is often shorthand for Pearson's chi-square test.

A chi-square test (also chi-squared or \( \chi^2 \) test) is any statistical hypothesis test in which the sampling distribution of the test statistic is a chi-square distribution when the null hypothesis is true, or any in which this is asymptotically true, meaning that the sampling distribution (if the null hypothesis is true) can be made to approximate
a chi-square distribution as closely as desired by making the sample size large enough.

Some examples of chi-squared tests where the chi-square distribution is only approximately valid:

- **Pearson's chi-square test**, also known as the chi-square goodness-of-fit test or chi-square test for independence. When mentioned without any modifiers or without other precluding context, this test is usually understood (for an exact test used in place of \( \chi^2 \), see Fisher's exact test).
- Yates' chi-square test, also known as Yates' correction for continuity.
- Mantel-Haenszel chi-square test.
- Linear-by-linear association chi-square test.
- The portmanteau test in time-series analysis, testing for the presence of autocorrelation
- Likelihood-ratio tests in general statistical modeling, for testing whether there is evidence of the need to move from a simple model to a more complicated one (where the simple model is nested within the complicated one).

One case where the distribution of the test statistic is an exact chi-square distribution is the test that the variance of a normally-distributed population has a given value based on a sample variance. Such a test is uncommon in practice because values of variances to test against are seldom known exactly.

### 3.10 Limitations of the study

The following are the limitations of this research study.

1. The study was restricted to IT companies only located in and around Pune.
2. The study was focused on IT companies only and hence results of the analysis are not applicable to other type of industries.