CHAPTER 4

RESEARCH METHODOLOGY

4.1 INTRODUCTION

Methodology is the vital part of each research work. This chapter explains about what type research work is adopted for sample design, tools for data collection and sources used in the research.

4.2 RESEARCH METHODOLOGY

Research is a systematic method of finding solutions to problems. It is essentially an investigation, a recording and an analysis of evidence for the purpose of gaining knowledge.

According to Clifford Woody, “Research comprises of defining and redefining problem, formulating hypothesis or suggested solutions, collecting, organizing and evaluating data, reaching conclusions, testing conclusions to determine whether they fit the formulated hypothesis”

Research Methodology is a method to solve the research problem systematically. It involves gathering data, use of statistical techniques, interpretations and drawing conclusions about the research data. It is a blue print, which is followed to complete the study. It is similar to builders blue - print for building a house.

4.3 RESEARCH DESIGN

The research design for this study is descriptive research in nature. Descriptive research is one of simplest kinds of research. It describes a
situation and involves a fact-finding investigation with adequate interpretation. The major purpose of this research is to describe the state of affairs as it exists at present. A research design is the orderly arrangement of elements and conditions for the collection and analysis of data in a manner that aims to combine relevance to the research objective with economy in procedure. It is a map or blue print for the study.

The methodology adopted for the study is analytical in nature. In analytical research, the researcher has to use facts or information already available and analyze these to make a critical evaluation of the problem.

4.4 SAMPLE DESIGN

A sample design is a part of the target population, carefully selected to present that population. The focus is on the small and medium industries in Coimbatore with manufacturing as their core operation.

4.5 PILOT STUDY

A pilot study was conducted with 40 staff level people to receive the feedback. Based on the feedback on the reliability of the survey instrument the study further progressed for getting the balance respondents.

4.6 SELECTION OF SAMPLE

Coimbatore is the second largest city in the State of Tamil Nadu next to Chennai. Coimbatore is a textile city famously called as Manchester of South India. And apart from the textile business Pumps and Motors, Foundries and Auto Components are also playing important role in the economic improvement of Coimbatore.
Coimbatore is an important auto component manufacturing hub in the country. It has its lion share of business in this segment sometime back. Almost 30% of the auto component requirements were met by Coimbatore. But things started taking a negative path recently. Many industrial set up are not able to meet the competitive onslaught by the other location players and started losing the market share.

This study focusing on the medium and large industries located in Coimbatore. There are around 250 such units operations here. These industries are having the basic quality systems in place like ISO 9001. It is estimated that there are around 5000 people occupying the staff level position in these organizations and this study focuses on the staff level only and operator level.

4.7 SAMPLE SIZE

Out of this 5000 managerial/staff level people researcher used the 500 employees as sample size for this work to represent the universe population. This include the representation from the major industries in Coimbatore. But the researcher has collected data from 493 respondents from 25 industrial units.

4.8 SAMPLE PROCEDURE

The procedure adopted in the present study is probability sampling, which is also known as chance sampling. Under this sampling design, every item of the frame has an equal chance of inclusion in this sample.

4.9 DATA SOURCES

Primary Data: Primary data is necessary for data collection. Primary data is collected from primary source that is; from the manufacturing companies
through discussions. In this study, the primary data include discussions with the employees of the company.

In order to fulfill the objectives set, a sample study was undertaken by using a well framed questionnaire that was duly filled by the respondents. A noteworthy feature was that all the 493 respondents filled the questionnaire with much zeal. The specimen of the questionnaire in English given to the selected sample respondents is shown in the Appendix section of the thesis.

**Secondary Data:** Data which are originally collected and obtained from the published or unpublished source are known as secondary data. It is collected from annual reports, published articles and in-house documents, company websites, journal and magazines, etc.

The primary data were supplemented by a spate of secondary sources of data. The secondary data pertaining to the study were gathered from the records of various service quality measuring and Insurance. Latest information was gathered from well equipped libraries in Coimbatore and from internet web resources. Further, the secondary data were also collected from leading journals such as Indian Journal of Marketing, Economic and Political Weekly, International Journal of Management and Marketing Research, Journal of Marketing Research, Journal of Marketing, Journal of Retailing, European Journal of Social Sciences, etc. A number of standard text books were studied to obtain pertinent literature on TQM for sustainability.

**4.10 TOOLS FOR DATA COLLECTION**

A well-structured questionnaire designed to collect the data from the employees. Questionnaire method is easy to adopt and collect data from the employees. Questions formulated to collect the data’s and opinions from the employees.
4.11 TOOLS AND TECHNIQUES

The collected data are entered into the SPSS (Statistical Package for Social Science). With the help of SPSS and AMOS 20.0 the researcher presented the collected data by percentage analysis. The software also used to generate the Frequency Table, Binominal Tables, ANOVA tables, Multivariate and Univariate tables, Correlation, Regression and Logistic Regression, Confirmatory factor analysis and SEM.