OBJECTIVES AND METHODOLOGY

Introduction

In the backdrop of the literature and its gaps as reviewed in previous chapter, this chapter presents the objectives of the thesis. To fill the gaps in the literature, the proposed objectives are framed in the context of India and related to automobile four-wheeler service sector. The detailed methodology to arrive the objective of this thesis is also included in this chapter.

3.1 Objectives of the Thesis

The objectives of the thesis work are framed and presented below

➢ To study the present status of four wheeler service sector by using questionnaire based survey and collection of the data for understanding various issues such as service priorities, critical service activities carried out, and some aspects for improving service.

➢ To analyze collected data by plotting graphs, statistical methods and analysis.

➢ To predict the delivery, services, and average service time etc. using a discrete event simulation model.

➢ To minimize the waiting time and total average time of the maintenance activities.
3.2 Methodology

Based on the questionnaire survey from various service centers, the data is analyzed using graphs, statistical techniques. A discrete event simulation model has been developed to predict the waiting and delivery times and optimized the service activities by using lexicographic search-technique. The flow chart of the study methodology is also shown in Figure 3.1.

- Framing the questionnaire of various aspects related to the automobile service sector in India.
- Administration of the questionnaire and collection of the data from the identified service centers.
- Summarization of the collected data and its analysis using related software like statistical package for social sciences etc.
- Consolidating the content wise results and highlighting various issues from it.
- Development of a discrete event simulation model based on the collected data.
- Modelling the service activities for a typical service centers and analysis.
- Optimizing the sequence of maintenance activities using a novelistic lexicographic search approach
- Comparison of simulated results from the improved sequence with the existing one
- Presentation of the summary of the results and scope for the future research

![Flow Chart of the Methodology](image)

Figure 3.1: Flow Chart of the Methodology
3.3 Summary

In this chapter, the objectives of the thesis and methodology to be applied for the thesis are presented briefly. The methodology to arrive the objectives is presented in the form of a flow chart. The next chapter gives the detail study on the questionnaire carried out in Indian automobile service sector and its analysis.