CHAPTER 3
AN OUTLINE OF THE PROPOSED WORK

3.1 INTRODUCTION

Having introduced the concept of Target Costing and detailing on a literature survey, this chapter gives a brief outline of the work. The scope of the work and an overall picture of the work are detailed below.

3.2 SCOPE OF THE WORK

As discussed in earlier chapters, it is evident that the companies’ world-wide have recognized the need for Target Costing and have understood the philosophy. From literature survey in chapter-2, it is evident that Target Costing has been implemented in certain organizations, mostly Japanese with considerable effort. However, it appears from the literature that no single work explicitly addresses the ways and means of implementing Target Costing. Though quality, reliability concepts, cost reduction methods are spoken of in Target Costing literature, no clear link/work has been established so far to explicitly portray the Cost and Quality Engineering aspects during Target Costing implementation.

The scope of this work is to perform certain studies on Cost and Quality Engineering aspects in a Target Costing process during New Product Development. This is proposed to be achieved by linking various Product Development tools like Value Engineering, Quality Function Deployment, Supply Chain Management, Failure Modes and Effects Analysis with Target Costing process. The scope of the work also includes validation of these useful linkages by appropriate cases from industries.

3.3 METHODOLOGY AND OUTLINE OF THE WORK

The methodology followed for this research work is detailed below.

- A thorough literature survey was conducted in the areas of Target Costing and the supporting tools for Target Costing.
- Based on the literature survey, the research objective was framed and the objective was broken into research questions.
A comprehensive model for Target Costing addressing the Cost and Quality Engineering aspects during NPD was developed which is based on the models and studies conducted by previous researchers.

This model is a combination of two sub-models namely, Cost – QFD (C-QFD) and Supply Chain QFD (S-QFD) models.

To ensure that customer requirements take priority throughout the Target Costing process, Quality Function Deployment (QFD) has been used as a primary tool in the Target Costing model.

Costs, Taguchi’s Design of Experiments, Fuzzy Logic, and Value Engineering were integrated with Quality Function Deployment to give a Cost – QFD (C-QFD) model for Target Costing. This model has been developed to address the Target Cost considerations for in-house manufactured parts where the manufacturer has more control on the design and manufacture of the part.

Supply Chain Management, Supplier Rating, Supplier Quality, and Supplier costs were integrated with Quality Function Deployment to give a Supply Chain – QFD (S-QFD) model for Target Costing. This model has been developed to address the Target Costing needs at the supplier end.

Reliability issues which come up during the cost reduction initiatives have been addressed using a Failure Modes and Effects Analysis (FMEA) approach.

The situations of drifting cost (achieved cost being greater than Target cost) and cost reduction pressures after product launch have been addressed using Kaizen Costing.

C-QFD, S-QFD and FMEA models have been validated using a case study conducted at an automotive ancillary manufacturer. The product that has been taken for the case is an Air Horn.

Kaizen costing initiatives suggested has been validated using a case study conducted again at an automotive ancillary manufacturer. The product taken for this case is a dashboard instrument cluster.

The proposed model for Target Costing during NPD is given in fig 3.1. All the above said theory is supported by relevant cases and is discussed in the forthcoming chapters.