CHAPTER 7

SUMMARY AND CONCLUSION

7.1 FINDINGS FROM THE RESEARCH

The research has been comprehensive keeping in trend the current and future needs of excellence in manufacturing. The result of this exhaustive study has brought out the application of the developed theories to the emerging business needs. While the earlier 6 chapters demonstrate the minute details of the research findings the salient ones are

- 84 manufacturing practices classified under 5 types
- 10 manufacturing objectives grouped under 5 factors
- Graded the relevance of the identified manufacturing objectives to the manufacturing practices.
- Correlation between manufacturing objectives and productivity
- Impact of deploying manufacturing practices
7.2 CONTRIBUTIONS

The abundance of available and emerging practices has confused the manufacturing companies in selecting the appropriate manufacturing practices. The need to identify appropriate manufacturing practice has become inevitable for survival itself.

This needed to evolve an exclusive model to select a manufacturing practice and to obtain recognition for the product in the global market.

This research study has given a holistic view of the various issues to be considered for excellence in manufacturing. The major contributions, which probably, is the first of its kind, are

- Guidelines to select appropriate manufacturing practices.
- Procedure to identify the required objectives of management for a particular situation.
- Analytical assessment of the available manufacturing practices for such identified objectives.
- Detailed research study for auto component industry in India in line with the global development.
- Identification of the key objectives for the selected manufacturing practices.
- Identification of the factors for manufacturing excellence.
- Categorisation of the identified manufacturing practices according to their core types.
• Bring out the relationship between the manufacturing practices and the objectives.
• Evolution of AMPSM model.
• Development of CATAMPSM model.
• The model that is simulated and validated.
• The impact assessment of deploying the selected manufacturing practices.

All the above have been adequately substantiated with current and live data.

The model by helping the Company will show its impact on the industrial growth of the country. The model is also versatile for global application.

7.3 LIMITATIONS

Research and development in this area is cumbersome. Identifying objectives and algorithms for manufacturing excellence and deploying in different organizations takes a lot of time and large-scale effort. Effective operation of such systems therefore requires not only use of logic but also appropriate inference, institution and experience.

The limitation of the study is the response rate to the e-questionnaire. Out of the 100 companies only 35 valid responses were received for analysis. Had the response rate been higher the results could have been much more accurate. Another limitation of the study is self-
supporting bias. This is a common problem when one collects data from entrepreneurs and CEOs about their company, particularly about their key areas.

7.4 SCOPE FOR FURTHER RESEARCH

The same model can be adopted for any type of manufacturing processes practised by small, medium and large scale industries. A similar approach can be made for excellence, world class design and management processes. The research attempt to define the relationship between excellence in manufacturing design and management processes can be another topic for further research. There could be research on cross comparative analysis of the manufacturing transformation methodologies practised between two countries as there exist lot of cultural differences. As the global section of world markets is getting accelerated the cross comparison study can bring out the cultural differences between the countries. A similar research can also be done by mapping the functions like planning, organization, control etc. instead of objectives against the manufacturing practices.

7.5 CONCLUSION

This Research presents a holistic model for selecting the appropriate manufacturing strategy to meet specified needs. This work outlines the method, incorporating simple mathematical procedures, which have been treated with caution, and human judgment relating to the conclusions.
The model takes into consideration all the vital policy directives like market requirements, quality factors, objectives and manufacturing practices comprehensively. The computer Aided Methods Selection Software has been employed to help the user to analyze the possible alternatives lucidly and objectively.

The thesis also suggests, that before making any commitment to install the recommended method, the user should read carefully the method description, some of the bibliography, and if possible consult with other plants that are using the recommended methods.