CHAPTER 5

CONCLUSION AND SUGGESTIONS

5.1 INTRODUCTION

In any business organisation costing system is an important and integral part of management system by providing relevant information to help managers make better decisions. Accurate costing is vital as it is required for financial decisions by the top management and can impact the profitability of the organisation.

There is a couple of issues related to costing in the organization. First, the share overheads in the overall costs have also been increasing over a period of time due to several factors such as scale of operation, diversification, globalisation, change in business environment, competition, etc. Second, the traditional costing systems that are being carried out for a very long time are now unable to provide accurate information on costing. Hence there is a shift in the costing system from traditional costing system to activity based costing system.

ABC is claimed by a large number of authors to be able to provide more accurate product costs in comparison to traditional costing system. It also possesses useful information for performance measurement, cost control and strategic decision-making. In addition, ABC can help firms in cost reduction, improved profitability and performance measurement. Despite ABC’s superiority over the traditional costing methods, many researchers have shown that its diffusion has remained slow and it has not been as widely adopted as was expected (Gosselin, 2007). Thus, ABC has become a focus of attention of researchers to investigate the factors influencing the decision to adopt ABC and the reasons for adopting / not adopting ABC, success and factors influencing the success of ABC, and the difficulties faced by the firms by design and use of ABC. The majority of prior research that attempt to examine the adoption and success of ABC were conducted in the western countries. However, few studies has been done in the Asian context (Lana and Fei, 2007; Fei 2010). In Indian context, there is dearth in the academic research examining management accounting practices in Indian companies (Kallapur& Krishnan, 2009). According to the researcher’s knowledge, so far there are very few studies in the context of ABC system. These
studies (Joshi 2001, Anand et al. 2005 and Sharma & Gupta, 2009) did not address the success and the factors that may influence the adoption and success of ABC among Indian business units. It might be possible that factors affecting ABC adoption and success may be different in Asian culture, such as India. Thus, this study is an attempt to identify the factors that determine the adoption and success of ABC and the reasons which have discouraged companies from adopting ABC, by using a sample of 186 large manufacturing industries in Karnataka state. The specific objectives of the study are:

1. To investigate the ‘characteristics and environment of the company’ factors that influence the adoption of ABC system in the manufacturing industry in Karnataka.
2. To analyse the reasons for the adoption/non-adoption of ABC system by the manufacturing industry in Karnataka.
3. To determine the benefits that the manufacturing industry in Karnataka have gained from the implementation of ABC.
4. To examine the degree of success of ABC system.
5. To investigate factors influencing ABC success by using behavioural and organizational factors in the manufacturing industry in Karnataka.
6. To study the difficulties for the design and implementation of ABC by the manufacturing industry in Karnataka.

The results previously analysed and discussed in the chapter 4 comprehensively. The finding are summarised in this chapter.

This chapter begins with the verification of the hypotheses. Section 5.3 presents a summary of the major research findings. This is followed by a section that describes the recommendations of the research. The limitations of the study are discussed in the next section and, in the final section, areas for future research are identified and discussed.
5.2 VERIFICATION OF THE HYPOTHESES

- Influence of the characteristic and business environment of the company on the adoption of ABC system

\( H_1: \) Production complexity has significant influence on the adoption of the ABC system by the companies.

\( H_1 \) formulated as ‘production complexity has significant influence on the adoption of the ABC system by the companies’ is rejected.

To verify the hypothesis, binary logistic regression analysis was conducted. The regression analysis showed that Chi-square is not significant (\( p>0.05 \)) and indicated very low values of Cox and Snell \( R^2 \) and Nagelkerke \( R^2 \), 0.004 and 0.006 respectively. The statistically significance value of the regression model was .367 (\( p>.05 \)), and hence non-significant. Thus, Hypothesis \( H_1 \) which suggests production complexity has significant influence on the adoption of the ABC system among the manufacturing companies in Karnataka cannot be supported.

\( H_2: \) Product diversity has significant influence on the adoption of the ABC system by the companies.

\( H_2 \) formulated as ‘product diversity has significant influence on the adoption of the ABC system by the companies’ is rejected, as the binary regression employed showed a non-significant Chi-square (\( p=.060 \)) and very low values of Cox and Snell \( R^2 \) and Nagelkerke \( R^2 \), 0.019 and 0.027 respectively. Such low measures, along with \( p \) value of .064 (\( p>0.05 \)) shows that this hypothesis cannot be accepted. Thus, \( H_2 \) is rejected.

\( H_3: \) Intensity of competition has significant influence on the adoption of the ABC system by the companies.

\( H_3 \) formulated as ‘intensity of competition has significant influence on the adoption of the ABC system by the companies’ is rejected.
To verify the hypothesis, binary logistic regression was conducted. Binary logistic regression established that the Chi-square was not significant ($\chi^2 = 0.181; p = .670$). The results of the regression analysis show that the intensity of the competition could not significantly predict the adoption of the ABC system ($p=.670$), and intensity of the competition accounted for only 0.1 percent of the explained variability in the adoption of ABC system (Cox & Snell and Nagelkerke $R^2 =0.001$). Thus, the hypothesis $H_3$ is rejected.

$H_4$: Percentage of total company cost accounted for by overheads has significant influence on the adoption of the ABC system by the companies.

$H_4$ formulated as ‘percentage of total company cost accounted for by overheads has significant influence on the adoption of the ABC system by the companies’ is accepted.

To verify the hypothesis binary logistic regression was conducted. The regression employed showed a significant Chi-square ($p=.000$). This implies that the model with one predictor (level of overheads) predicts the dependent variable (adoption of ABC) not just by chance. The Cox and Snell $R^2$ value shows that 11.5 percent of the variation in the adoption rate of ABC is explained by the logistic model. The Nagelkerke $R^2$ value of 0.163 indicates relationship of 16.3 percent between the level of overheads and the adoption of ABC.

The findings from the analysis of data revealed further that the level of overheads has positive and significant influence on the adoption of ABC system by the manufacturing companies in Karnataka ($p=.000$, $\beta = 0.930$, $\text{Exp}(B) = 2.534$). Thus, $H_4$ is accepted.

The results on production complexity, product diversity and intensity of competition as determinants of adopting / not adopting ABC system by the large and mega companies in Karnataka show that these factors did not have any significant influence on the adoption of ABC. These factors were presented in the theoretical work as being the dominant motives for adopting ABC system.
A possible explanation for non-significance might be due to the effect of other factors, such as the national culture. While comparing the adoption of certain traditional and recently developed management accounting practices between Indian and Australian companies, Joshi (2001) derived an analogy from these two societies and how their perception varies in terms of adopting new systems. Joshi (2001) argues that long history of heritage thwarts the Indians from taking drastic decisions. Therefore, it takes a longer time for them to change their societal values and practices. From the context of the newly emerging management accounting techniques, it can be presumed that Indian companies are more likely to be late adopters rather than early adopters in comparison to other countries. Further, Indian management having a conservative attitude towards new changes and challenges prevents it from adopting new system, including low adoption of the new management accounting techniques. Many Indian companies believe that it is quite expensive to adopt the new management accounting techniques particularly, for benchmarking. Lack of training and expertise in these areas are possible added reasons. He stated further that Gandhi’s philosophy of ‘swadeshi’ (self-reliance or one’s own country) still dominates the minds of many Indian traditional managers in which they are reluctant to subscribe to foreign ideas, to buy foreign goods and resources. This attitude makes the Indian companies to believe that the traditional management accounting techniques should be applied to gain benefits derived from these techniques. The reason for this trend can be attributed to the fact that Indian companies are much more wary of using any system that is untested, because the Indians are not comfortable with uncertainty hence try to avoid it to a great length (Joshi, 2010).

The nature of the sample might be the other possible reason for the non-significant influence of the tested factors on the adoption of ABC system in this study. The sample of this study is relatively homogeneous with respect to the size and industrial sector of the responding companies. The companies which participated in the study were only large and mega manufacturing industries. Further, majority of the companies belonged to the engineering industries, followed by steel, metal and Iron, chemical and pharmaceutical, electronics and electrical industries, which predominantly have high and convergent degrees of production complexity and diversity. Thus, specific factors such as level of production complexity or product diversity are
substantially identical for all companies in the respondents sample and do not differentiate the responses here on the adoption of ABC.

- **Relationship between behavioural and organizational factors and the success of ABC system**

  \( H_5: \) Top management support has significant relationship with the ABC success.

  \( H_5 \) formulated as ‘top management support has significant relationship with the ABC success’ is accepted.

  To verify the hypothesis, simple regression was adopted. The output of the regression model shows that the unstandardized coefficients (\( \beta \) value) for ‘top management support’ was 0.414, and the p value was .000 (p<.05). Hence, \( H_5 \) might be supported and a conclusion can be drawn that top management support has significant relationship with the ABC success.

  \( H_6: \) Linkage to competitive strategies has significant relationship with the ABC success.

  \( H_6 \) formulated as ‘linkage to competitive strategies has significant relationship with the ABC success’ is also accepted, as the results of simple regression show that the \( \beta \) value for ‘linkage to competitive strategies’ was 0.286, and the p value was .000 (p<.05). This indicates that ‘linkage to competitive strategies’ affected ABC success significantly. Therefore \( H_6 \) is accepted.

  \( H_7: \) Linkage to the performance and compensation has significant relationship with the ABC success.

  \( H_7 \) formulated as ‘linkage to the performance and compensation has significant relationship with the ABC success’ is accepted.

  To verify the hypothesis, simple regression was adopted. For the independent variable ‘linkage to the performance and compensation’, the unstandardized coefficients (\( \beta \) value) was 0.373 and it has a significant effect on the ABC success with a p value of .000 (p<.05). So, it can be concluded that linkage to the performance
and compensation has significant relationship with the ABC success and H7 is therefore accepted.

\textit{H8: Non-accounting ownership has significant relationship with the ABC success.}

H8 formulated as ‘non-accounting ownership has significant relationship with the ABC success’ is accepted. The results of simple regression revealed that the independent variable ‘non-accounting ownership’ impacted ABC success significantly at the significance level of 0.05 (p = .000). Furthermore, the results of the regression model show that \( \beta \) value was 0.408. These results indicates there was significant and positive relationship between ABC success and ‘non-accounting ownership’. Hence, H8 which predicts a significant relationship between ‘non-accounting ownership’ and ABC success is supported.

\textit{H9: Clarity of the objectives of ABC has significant relationship with the ABC success.}

H9 formulated as ‘clarity of the objectives of ABC has significant relationship with the ABC success’ is also accepted, as the results of simple regression show that the \( \beta \) value for ‘clarity of the objectives of ABC’ was 0.317, and the p value was .000 (p<.05). This indicates that ‘clarity of the objectives of ABC’ affected ABC success significantly. Therefore H9 is accepted.

\textit{H10: Training has significant relationship with the ABC success.}

H10 formulated as ‘training has significant relationship with the ABC success’ is accepted.

To verify the hypothesis, simple regression was adopted. For the independent variable ‘training’, the unstandardized coefficients (\( \beta \) value) was 0.305 and it has a significant effect on the ABC success with a p value of .000 (p<.05). So, it can be concluded that training has significant relationship with the ABC success and H10 is therefore accepted.

The hypotheses tests results are in agreement with Shields (1995) findings which showed that top management support, linkage to competitive strategies, linkage to the performance and compensation, and non-accounting ownership
independently are significantly associated with ABC success. The findings of Byrne (2011) revealed that top management support, performance evaluation/reward link, training, and linkage to competitive strategies have a significant influence on the success of ABC independently.

**H11:** Top management support, linkage to competitive strategies, linkage to the performance and compensation, non-accounting ownership, clarity of the objectives of ABC and training have significant relationship with the ABC success.

H$_{11}$ formulated as ‘top management support, linkage to competitive strategies, linkage to the performance and compensation, non-accounting ownership, clarity of the objectives of ABC and training have significant relationship with the ABC success’ is partially approved, as the multiple regression analysis shows that only two of the six independent variables are statistically significant: top management support ($p = .006; \beta = 0.246$) and training ($p = .030; \beta = 0.193$). Linkage to competitive strategies ($p = .844$), linkage to the performance and compensation ($p = .065$), non-accounting ownership ($p = .784$), and clarity of the objectives of ABC ($p = .263$) are not statistically significant. Thus, H$_{11}$ can be only partially supported.

Regarding the success factor ‘top management support’, the result of recent study is consistent with almost all the earlier studies (Shields, 1995; Anderson, 1995; Shields & McEwen, 1996; Foster & Swenson 1997; McGowan & Klammer, 1997; Krumwiede 1998a; Sohal & Chung, 1998; Innes & Mitchell, 1995 and 2000; Chongruksut, 2002; Pierce & Brown, 2006; Lana & Fei, 2007; Baird et al., 2007; Fei, 2010; Byrne, 2011; Al-Omiri, 2011) that found that ‘top management support’ was critical to the success of ABC system. In relation to the other factors, the results of the present study are in agreement with a few of the studies and not in agreement with other studies. Sometimes only few factors predicted the ABC success and not all the factors. Researchers like Krumwiede (1998a), Baird et al. (2007), and Maelah and Ibrahim (2007) could not find pertinent relationship between the success of ABC and the training. Krumwiede (1998a), Baird et al. (2007) argue that there exists no relevant link between the success of ABC and training in the early stage of ABC implementation. Maelah and Ibrahim (2007) were unable to correlate the association between training and ABC adoption in the manufacturing companies in Malaysia and
concluded that training was impertinent in influencing the success of ABC only at the initial stage of ABC implementation. Baird et al. (2007) opined that performance assessment had no significant impact on the success of ABC. Further, Charaf and Rahmouni (2010) inferred that there exists no relationship between top management support or consensus about objectives and the success of the ABC project. They focused on the overall success of ABC, and it is possible these factors may influence the success of only certain stages of the ABC.

Fei (2010) studying ABC success in the Chinese manufacturing companies also failed to relate the relevance between linkage of ABC to competitive strategy, training, linkage of ABC to performance compensation and evaluation, non-accounting ownership, as well as clarity of ABC objectives and ABC success and opined that this failure can be explained by the fact that most of the firms in their study were at an early stage of ABC implementation.

In this study, most of the ABC adopters were at the mature stage. According to Krumwiede (1998a) and Byrne (2011), the company is at a mature stage, when it had moved beyond the acceptance stage and was at the more mature stage where the ABC information was commonly used in their job performance. In this study, 75 percent of the respondents companies were at the later stages of ABC implementation. That may explain the strong link between the success of ABC and the training in this study. Thus, the results obtained in this study have provided support for the importance of distinguishing the various stages of ABC implementation.
5.3 SUMMARY OF THE MAJOR RESEARCH FINDING

5.3.1 Individual Respondents and Company Profile

- The demographic profile of the respondents shows that the respondent companies had investments for plant, machinery or equipment of more than Rs.1000 lakhs.

- The company officials responding to the questionnaire were 93.5 percent male respondents. Majority of the respondents (58.6 percent) were in the age group of 41 to 60 years. The educational profile revealed that over 75.8 percent were post graduates with significant experience of over five years up to 20 years in the area of finance.

- The majority of the companies belonged to the engineering industries (21 percent), followed by steel, metal and Iron (14 percent), chemical and pharmaceutical (13 percent), electronics and electrical industries (12 percent) and then the textiles industries (8 percent). These respondents were to a large extent representative of the originally selected population of listed companies on the Department of Industries and Commerce, Government of Karnataka.

- 20.4 percent of the respondent companies were public companies and 79.6 percent were private companies. Among the private companies 21.6 percent had adopted the ABC system, while 63.2 percent of the public sector companies had adopted ABC system.

- 18.8 percent of the respondent companies were multi-national companies and 81.2 percent companies were of Indian origin. Among the Indian companies 29.1 percent companies had adopted the ABC system, while the adoption rate among the multinational companies was much higher, i.e., 34.3 percent.

- The majority of the companies with high level of production complexity, product diversity, and intensity of the competition were ABC non-adopters. 52.8 percent of companies with high level of overheads have adopted ABC.

5.3.2 Adoption of Activity Based Costing System

Only 56 companies (30.1 percent) were observed to have adopted the activity based costing system in their companies. The survey revealed that the implementation of the system was in different stages. For instance 13 percent had approved the
implementation; another 12 percent had carried out the feasibility analysis. About 21 percent had reached the ‘getting acceptance’ stage and remaining (54 percent) had started using the system varying from occasional usage to extensive usage.

5.3.3 Reasons for the adoption of ABC

The reasons for the adoption of the ABC system were evaluated after classifying them into three main groups, namely, inherent weakness of the existing systems, change in the characteristic and business environment of the company and interference from external agencies. The group ‘inherent weakness of the existing systems’ group was ranked as the highest with mean value (3.56) suggesting that the respondents cited the need for more accurate information, inability of existing system to provide useful information to the management, facing allocation problems, and improvement of cost control as the most important reasons for adopting ABC by the manufacturing industries in Karnataka. These results are consistent with the results of Anand et al. (2005) where they stated that the most important reason for introduction of ABC in the Indian manufacturing companies was deficiencies relating to the existing costing system to provide useful information to the management.

The ‘change in the environment of the company’ group, which includes the increasing proportion of overheads, number of product variants, and competition, was also cited by the respondents as major reasons for adopting ABC system (mean value = 3.40). The mean value 2.68 denied external factors such as pressure from the government and advice from auditors and consultants to have any role in ABC adoption.

These results are consistent with the finding of Al-Omiri and Drury (2007); Nassar et al. (2009); Sartorius et al. (2007); and Chongruksut (2002), which reported that the most important reason for implementation of ABC was the deficiencies relating to the existing costing system, followed by the changed environment.

5.3.4 Benefits gained from ABC System

The companies that had implemented the ABC system strongly perceived that they had highly benefited from the system. Out of the 14 potential benefits of implementing ABC system, the individual respondents strongly agreed that the
improvement in the quality of decisions and better cost control information (mean value = 4.51), more accurate product cost (mean value = 4.44) and improvement in product cost/profitability information (mean value = 4.32) were critical benefits gained from the implementation of ABC within the large manufacturing industries in Karnataka. Moreover, the individual respondents cited assistance in cost reduction efforts (mean value = 4.09) and the increasing effectiveness of budgeting (mean value = 4.05) as major benefits. However, the other eight statements were also on the agreement side, since mean values exceeded 3.0. Mean values ranged from 3.33 to 3.92. It seemed that the large manufacturing industries in Karnataka that have implemented ABC have gained significant benefits that are related to the core purpose of ABC, that is cost measurement accuracy.

Similar results reported by many studies (Clarke et al., 1999; Innes & Mitchell, 2000; Chongruksut, 2002; Cohen et al., 2005; Yousif & Yousif, 2012).

5.3.5 Success of ABC system

The success of implementing the activity based costing system was measured using four indicators namely the attitude towards implementation of ABC system, technical characteristics of ABC system (accuracy – accessibility - reliability of information – timeliness – understandability), perceived usefulness of the system in enhancing the job performance and its impact on organizational processes. The results obtained from the questionnaire survey are presented in the table 4.30. Technical characteristics of the information was ranked as the highest with mean value (4.33) suggesting that respondents perceived that information supplied by ABC were more accurate, more accessible, more reliable, more timely, and more understandable than traditional costing system. The finding is consistent with Byrne’s (2011) study in the Australian context, which found that respondents perceived technical characteristics as the most successful among the four measures of ABC success. The results indicated further that attitude of the respondents towards the implementation of the ABC was highly favourable (mean value = 4.17) have found it to be useful with respect to improvement of job performance (mean value = 3.82) and impact on organizational processes (mean value = 4.21).
Based on the overall mean value (4.13), the overall ABC success was at satisfactory level of success among manufacturing industries in Karnataka. The degree of the success reported in the present study has been much higher than that reported by Byrne (2011) (mean value = 2.2). This high difference might be due to the difference in national culture, as Brewer (1998) argues that the degree of ABC success is higher in a high-power-distance / collectivist culture. Indians tend to view themselves in collective rather than individualistic terms and also exhibit the existence of a hierarchical order type for power distance (Joshi, 2001).

### 5.3.6 The problems encountered in the design and implementation of ABC

The problems encountered in the design and implementation of ABC system were analysed by classifying the factors into technical issues, behavioural issues and system issues. Factor analysis was used in this study to check for the component validity of problems encountered in the design and implementation of the ABC system and to evaluate the level of difficulties in designing and implementing ABC. Principal component extraction method was used to extract the factors from the survey responses. The result of factor analysis shows that three factors had Eigen value more than 1 and they explained 67.31 percent of the variability of the data. The results indicated that the factor ‘technical issues’ contributed to 35.55 percent of the variation in the data, followed by the factor ‘system issues’ (18.87 percent) and ‘behavioural issues’ (12.89 percent), suggesting that the greatest difficulties that the manufacturing industry in Karnataka faced by implementing ABC were more technical difficulties than behavioural or system difficulties. Similar results were reported by Chongruksut (2002) in Thailand, Alsaeed (2005) in Saudi Arabia and Nassar et al. (2009) in Jordan. However, these findings contrast with the results of the studies conducted by Shield and Young (1989), Shields (1995), and Krumwiede (1998a). Shield and Young (1989) and Shields (1995) indicated that most problems with ABC are not attributed to technical barriers and the results of Krumwiede (1998a) suggest that the barriers to ABC result more from behavioural and organizational variables than from technical ones.

Under ‘technical issues’ and ‘system issues’, 9 items are considered to be the greatest difficulties in implementing and using ABC system -difficulty in selecting cost drivers, difficulty in defining activities, difficulties in allocating costs to
activities, high cost of implementing ABC, difficulties associated with gathering the data required, take a lot of managers’ and computer staff’s time, lack of software packages, and difficulties associated with information systems. The ‘behavioural issues’ such as lack of top management support and internal resistance to change, were not important problems of designing and implementing ABC in the manufacturing industries in Karnataka. Overall, the achieved results give more priority to technical problems at the expense of behavioural problems. This might be due to high-power-distance culture of the Indian people. In such culture, the people tend to fulfil with what their superior says and most decisions are made by top executives. Thus, resistance from employees was not seen as a serious problem. Other possible reason might be that most of the respondent companies in this study were in the late stage of ABC implementation, as Clarke and Mullins (2001) explained that behavioural problems arise in the early stages.

5.3.7 Reasons for non-adoption of the ABC

The reasons for not adopting of ABC system were analysed by classifying the factors into ‘inherent difficulties with ABC’, ‘the characteristics and business environment of the company’, and ‘confidence in the older existing costing system’. Factor analysis was used in this study to check for the component validity of the factors for not adopting ABC system and to evaluate the level of influence these factors had for non-adoption. Factor analysis extracted three factors with Eigen value more than 1 that could explain 55.49 percent of the total variance. The factor ‘inherent difficulties with ABC’ contributed to 25.84 percent of the variation in the data, followed by the factor ‘confidence in the existing costing system’ (17.88 percent) and ‘the characteristics and business environment of the company’ (11.77 percent), suggesting that the greatest important reason which has discouraged manufacturing industry in Karnataka from adopting ABC was that they face certain inherent problems in the implementation of the ABC system such as the complexity of ABC system and the lack and high cost of the consultants. Under the factor ‘inherent difficulties with ABC’, 4 items were considered to be the most important reasons for rejecting the adoption of ABC system -high costs of designing and implementing ABC, complexity of ABC system and the lack of the consultants and high cost of consultants.
This finding is consistent with the results reported by Ernst and Young (1995), Innes et al. (2000), Cauvin and Neumann (2007), Nassar et al. (2009) and Yousif and Yousif (2012).

Under the factor ‘confidence in the older existing costing system’, the item ‘satisfaction with the current system’ had factor loadings of 0.7, suggesting that the satisfaction with the traditional system is a major reason for not adopting ABC system in the manufacturing companies in Karnataka. This finding is consistent with the results of Joshi (2001) which reported that the Indian companies are satisfied with the output of the traditional system. Chongruksut (2002) and Nassar et al. (2009) have reported that one of the commonest reasons amongst the Asian companies for not using the ABC is their satisfaction level with their existing system is very high.

‘The characteristics and business environment of the company’ was considered from the individual respondents as not very important reasons for not adopting ABC in the manufacturing industries in Karnataka, as the factor loadings were less than 0.7.

5.4 RECOMMENDATIONS OF THE STUDY

- On analysing the results obtained from this research, it was noticed that many companies that have never adopted ABC had a high degree of product diversity, production complexity and / or intensity of competition. Past literature has clearly demonstrated that using traditional costing systems for such environment will probably lead to reporting of inaccurate product costs. Therefore, it is recommended that implementing the ABC system in these companies would enable the companies to be more effective in managing and reducing overheads, which could cascade into improving profits.

- According to the findings of this study, top management support is the most crucial factor in deciding if the ABC system implementation could be successful or not. Top management in any company takes the final decision in implementing a new system. Lack of support from top management may fizzle out efforts that have gone into implementation or can take away the rigour with which it is used. Thus, it can be argued that without the support from top management, ABC implementation is unlikely to be successful. Indian
companies, which still follow traditional system of process, can benefit from the top management support for the successful implementation of ABC. Further, organization culture in India is very different from those in western countries. India follows high-power-distance/collectivist culture, where Indians often view themselves in collective rather than individualistic terms and also exhibit the existence of a hierarchical order type for power distance (high-power-distance/collectivist culture). Therefore, the top management support will provide the driving force for the implementation of ABC and ensure its success. Further, the top management has the power to curb resistance as well as motivate the use of ABC. Hence, it is necessary for top management to take responsibility to support ABC implementation by providing required resources to the ABC implementation effort, committing to use the ABC information as a foundation for decision making.

- Training has been evidenced as another vital factor for the success of the ABC system. Indians are not comfortable with uncertainty hence try to avoid it to a great length (Joshi, 2010). It is a well-know fact that countries which strongly avoid uncertainty, change is perceived by them as being dangerous. On the contrary, in low-uncertainty-avoidance cultures, change is perceived as an opportunity. Thus, employees from high-uncertainty-avoidance cultures will need training while implementing the ABC system. The training will expose them to nature of the process and how a process could be successful if effectively used. In effect, the ABC training given to the top management of the non-adopter companies, and also to the employees and the managers can have a significant effect on accepting the ABC system. The results of this study indicate that most of the time, the top management is the initiator of management practices in the company. Therefore, the training should focus on bringing out the difference between the traditional costing system and the ABC system and increase the awareness on the benefits of the ABC implementation. Training on ABC will reduce the uncertainty and resist the introduction of ABC. Further, training will boost the confidence of the management, develop a positive outlook towards the ABC system and motivate the managers to use information obtained from the ABC to take decisions. This study also recommends the employees in the companies that
are using ABC to be adequately trained in ABC system, as ABC training can be used to educate employees as well as reduce resistance to change and the feeling of being threatened. Further, with ABC training, the ABC user in the company will realise the need for appropriate information, which can be used for decision making, thus increasing the success of business strategy.

- Training in the ABC system also spreads awareness and insights about the benefits of ABC system among the employees. Eventually, it is hoped that the ABC system can be successfully implemented in manufacturing firms.

- Finally, the finding of this study reported that one of the greatest challenges that companies face in the implementation and design of ABC is technical problems including the difficulty in defining the activities and selecting a cost driver. Technical issues can be overcome by training in designing, implementing and using ABC. It provides a mechanism for managers and employees to understand and accept ABC as well as to be convinced about the use of the ABC.

5.5 LIMITATIONS OF THE STUDY

- The exact implication of the study cannot be established as the present study did not verify the influence of factors in each stage or as companies’ progress from one stage to the next. Researchers, such as Krumwiede (1998a) and Byrne (2011) argued that at different stages of ABC implementation the dominant factors in determining ABC success are also different.

- Since questionnaires were used as the major source of data collection, there is a lack of interaction between the researcher and the respondents. Further, there is a possibility that respondents may misunderstand survey questions. The attitude of the respondent at the time of filling the questionnaire may also affect the results.

- Only manufacturing industries were involved in the present study. The applicability of findings of ABC success cannot be generalized on all types of industries. There is a chance factor that the other types of industries may have different viewpoints on ABC success and factors influencing ABC adoption and success.
Further, the sample selected represented only large manufacturing industries. Differentiating the responses here on the adoption of ABC may not be possible to the maximum extent and hence difficult. Thus, specific factors such as level of production complexity, product diversity or the percentages of the overheads might be substantially identical for all companies in the respondents sample.

5.6 SUGGESTIONS FOR FURTHER RESEARCH

- The researcher is of the view that, rather than the questionnaire method, case study approach would be better to get deeper insights into the phenomena of success of ABC. This can be extended to companies which have adapted ABC first and later rejected the ABC adoption.
- The cultural setting where the researcher is working is also important. National-culture might influence the specific factors of the ABC adoption and success. Hence, future research can study the adoption of ABC in other cultural settings also. Further, comparison between Indian and other cultures in adoption of ABC and its success could be of interest.
- Researchers can focus on the success of ABC implementation at different stages-for example, in the early stage of adoption, middle stage, and end stage too.
- Organizational culture, corporate sector and other factors also may influence ABC adoption. Some of the researchers can throw more light on this aspect and study them.
- Lastly, broader ground for research is recommended for future studies in order to acquire a more comprehensive view of the contemporary management accounting practices in the companies in India. The study can also be extended to service and government sectors.