

CHAPTER 6

SUMMARY AND CONCLUSION

6.0 Introduction

This chapter summarizes comprehensively the results previously presented and analyzed in chapter 5 comprehensively, especially, the hypothesis testing results. It discusses the extent to which the analysis was carried out and the results reported in the previous chapter are able to provide answers to the research questions and achieve the research objectives. This chapter also discusses the research findings based on the research questions highlighted in the first chapter.

From the discussion that follows, a number of conclusions were drawn together with some practical implications. This is followed by a discussion on the limitation for this research. The present chapter also provides recommendations for future research. The present chapter ends with some concluding remarks on the overall thesis.

This chapter is organized as follows; section 6.1 summarizes the main research findings. This is followed by a discussion on the problems that the Chinese manufacturing firms encountered during ABC implementation in section 6.2, the implications of the study and discussion on the limitation of the study are presented in section 6.3 and section 6.4 respectively, while section 6.5 outlines the suggestion for future research, the final section covers the conclusion for this research.

The major objective of this research is to investigate the factors influencing the Activity-Based Costing (ABC) success implementation by examining behavioral and organizational variables, technical factors, organizational structure and organizational culture. Another main aim of this research is to examine the effect of ABC on the firms' performance, namely, manufacturing performance and business performance.

Figure 6.1 displays the framework of the research.

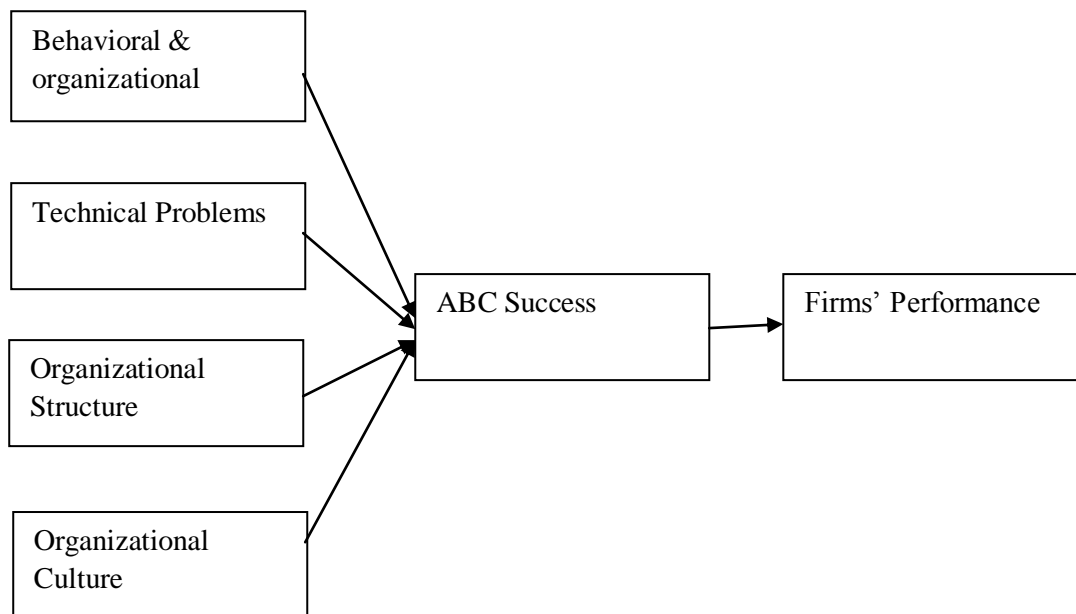


Figure 6.1: The Research Framework of the Study

Two regressions equations related to the above model:

1. Overall model: $Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e$

Where $Y = \text{ABC success}$

$X_1 = \text{Behavioral and organizational variables}$

$X_2 = \text{Technical problems}$

$X_3 = \text{Organizational structure}$

$X_4 = \text{Organizational culture}$

The second model in this research is also presented as follow:

2. Research model: $Y = b_0 + b_1X_1 + e$

Where $Y = \text{Firms' performance}$

$X_1 = \text{ABC success}$

Research Hypotheses

1. Relationship between behavioral and organizational variables and ABC success

H1: There is a positive relationship between behavioral and organizational variables and ABC success.

2. Relationship between technical problems and ABC success

H2: There is a negative relationship between technical problems and ABC success.

3. Relationship between organizational structure and ABC success

H3: There is a positive relationship between organizational structure and ABC success.

4. Relationship between organizational culture and ABC success

H4: There is a positive relationship between organizational culture and ABC success.

5. The difference in terms of the level of ABC success with the different type of strategies firms adopt

H5: There is a difference in terms of ABC success among different type of strategies firms adopt.

6. Direct relationship between ABC success and firms' performance

H6: There is a positive relationship between ABC success and firms' performance.

In China, the literature review to date reveals only one published case study by Lana and Fei (2007) on factors influencing ABC success. Other studies about factors influencing ABC are limited which only focus on behavioral, organizational and technical factors developed by Shields (1995). The study by Gosselin (1997) provides the only empirical evidence about the effect of organizational structure on ABC success among Canadian business unit. He found that formalized and centralized structure were associated with ABC implementation. Baird *et al.* (2004) and (2007) examined the relationship between organizational culture and ABC adoption and implementation. They found that the organizational culture impacted both the ABC adoption and implementation stages significantly. So far, only one research conducted by Baird *et al.* (2007) examined the effect of organizational culture on ABC success implementation. Furthermore, except for Lana and Fei (2007), most studies were done in the Western context. It might be possible that factors affecting ABC success differently in an Asian culture, such as China.

Therefore, this study attempted to extend previous studies by comprehensively examine the influence of culture and structure together with behavioral, organizational and technical variables on ABC success. Furthermore, this study extends Ittner *et al.*'s (2002) study, which investigated the effect of ABC implementation on manufacturing performance by examining the impact of ABC success on both the firms' manufacturing and business performance.

6.1 Research Findings Summary

This section presents the summary of the research findings and the research objectives.

6.1.1 Summary of Statistics

The main statistics relating to the main research variables are presented in this section. The means for overall behavioral and organizational variables was 3.37 (SD=0.77), and the mean score for the sub components, namely, top management support, adequate resources, training, link ABC to performance evaluation and compensation, non-accounting ownership, linkage of ABC to competitive strategies and clarity of ABC objectives were 3.56 (SD=1.09), 3.48 (SD=1.03), 3.28 (SD=1.01), 3.37 (SD=1.09), 3.33 (SD=1.00), 3.27 (SD=1.00), 3.27 (SD=1.00) respectively. All the mean values were above the average (mean value=3.00). It indicates among participating Chinese manufacturing firms are as follows:

- Top management provided a high level of support to the ABC implementation, firms had a moderate level of resources needed by ABC implementation,
- A moderate level of training during ABC implementation stage,

- ABC system was linked to performance measurement and compensation moderately,
- ABC was also linked to competitive strategies, especially quality issue moderately,
- The marginal level of the involvement of non-accounting staffs during the process of ABC implementation, as well as
- The objectives of ABC system were understood by designers and users marginally at the early stage of implementation.

For the technical problems, the overall mean score was 2.52 (SD=0.93). This indicates that during ABC implementation process, firms had good technical support and experienced a relatively lower level of practical problems. Among the mean scores for technical factors, the item “ABC involves great deal of work” had the lowest mean value (mean score=2.29, SD=1.15). It indicates that with the adoption of the suitable software, modern technology, and advance equipment, ABC implementation stage would be much easier than previously.

For the variable of corporate culture, the overall mean score was 3.80. Among the sub components of organizational culture, the highest mean value was found for attention to details (mean value=4.08, SD=0.85), followed by the mean scores of team orientation (mean score=4.03, SD=0.91) and outcome orientation (mean value=3.96, SD=0.98), while the lowest value was for innovation (mean score=3.12, SD=0.94). This indicates that the firms perceived attention to details was of greatest value. And respondents also placed high emphasis on team work. However, the lowest mean score for innovation

indicates a moderate level of innovation culture in the corporate culture among participating Chinese firms.

The mean score for the overall organizational structure, formalization and centralization structure were 3.69 (SD=0.61), 3.88 (SD=0.69) and 3.50 (SD=0.61) respectively. It indicates that respondent firms can be generally categorized as mechanistic organizations. It also indicates that policies, rules and procedures were highly formalized, while, decision making authorities were moderately centralized.

And the mean score for ABC success also suggests that respondents perceived that overall ABC implementation accomplished a satisfactory level (mean score=3.58, SD=0.73). Among all the sub components, mean scores were all above 3.00 suggesting that respondents perceived that ABC application could generally lead to an improvement in job performance, enhancement in operating processes, as well as providing more accurate information, and favorable respondents' overall attitude towards ABC.

Furthermore, perceived overall performance was slightly higher than average with mean of 3.05 (SD=0.68), and the mean values for perceived manufacturing performance and business performance were 3.04 (SD=0.94) and 3.06 (SD=0.63) respectively. It indicates that respondents perceived that they have achieved a marginal level of manufacturing performance and business performance after ABC success implementation.

6.1.2 Objectives of the Research

The research objectives and the findings related to each objective are discussed in this section. Based on the research framework, the specific research objectives are presented as follow:

1. To examine whether there is a significant relationship between organizational and behavioral variables and ABC success.
2. To examine whether there is a significant relationship between technical variables and ABC success.
3. To examine whether there is a significant relationship between organizational structure and ABC success.
4. To examine whether there is a significant relationship between organizational culture and ABC success.
5. To examine whether there is a significant difference which exist among the different type of strategy in terms of ABC success.
6. To examine whether there is a significant relationship between ABC success and firms' performance.

6.1.2.1 Research Objective 1

Research objective 1 is to examine the relationship between the organizational and behavioral variables, such as top management support, non-accounting ownership, adequate training, link ABC to performance measure and compensation, link ABC to competitive strategies, clarity of ABC objectives, as well as internal resources and ABC success as stated in the Hypothesis 1 and its sub hypotheses. The regression shows that among the subcomponents of behavioural and organizational variables, top management support ($\beta=0.653$; $p=0.000$) was the most significant predictor of ABC success. This finding is consistent with the findings of Shields (1995), Shields and

McEwen (1996), as well as Krumwiede and Roth (1997), who also found a positive and significant association between ABC success and top management support. While, other subcomponents of behavioral and organizational variable, namely, adequate resources (beta=0.142; p=0.140), non-accounting ownership (beta=0.356; p=0.328), training (beta=0.072; p=0.551), link ABC to performance measure and evaluation (beta=0.139, p=0.140), link ABC to competitive strategies (Beta=0.185, p=0.101), and clarity of the objectives of ABC (Beta=0.058, p=0.567). Since, only top management support was found to be positively and significantly related to ABC success implementation, thus, the objective 1 of this research which is aimed to investigate whether a positive and significant relationship between behavioral and organizational variables could only be considered as partially confirmed.

6.1.2.2 Research Objectives 2

The second objective in this research is to examine the relationship between technical problems and ABC success, which is stated by Hypothesis 2. The results of Pearson correlation ($r=-0.479$; $p=0.000$) and multiple regression (beta=-0.212; $p=0.006$) presented a negative significant relationship between technical problems and ABC success, which supported Hypothesis 2. It indicates that during ABC implementation process, if firms experience less technical problems, they can have a higher level of ABC success. The finding is not consistent with Shields (1995) and Shields and McEwen (1996) who concluded that the technical factor is not a significant factor in explaining the ABC success. However, this research finding is confirmed by the finding of Taba's (2005) a survey among South African Post Office, which showed that technical factors significantly influence the ABC success. The finding also supports the view expressed by Lana and Fei (2007) that technical factors, such as selection of suitable cost drivers, identification of activities and so on can influence ABC success.

6.1.2.3 Research Objective 3

The third objective of this research is to examine the effect of the organizational structure, namely centralization and formalization on ABC success as stated in Hypothesis 3 and its sub hypotheses. The results showed a positive and significant relationship (Beta=0.377; $p=0.000$) between the formalization and ABC success implementation. This finding is consistent with the study by Gosselin (1997) among Canadian business units, which found that formalization was significantly associated with the implementation of ABC. However, this study found a positive but insignificant association between centralization and ABC success implementation (Beta=0.009; $p=0.926$). The result is not consistent with the findings of Gosselin (1997), who also found a significant relationship between the two variables. The finding is also not confirmed by Lana and Fei (2007), who found that the mechanistic structure could result in ABC success. Due to the failure to find a significant association between centralization and ABC success implementation, hence, objective 3 which state to investigate whether a significant relationship exists between organizational culture and ABC success implementation was only partially confirmed.

6.1.2.4 Research Objective 4

The fourth objective of this research is to examine the direct relationship between organizational culture, namely outcome orientation, innovation, team orientation, as well as attention to details and ABC success as stated in Hypothesis H4 and its sub hypotheses. The results suggest that the most significant predictor among the subcomponents of organizational culture was the outcome orientation (beta=0.475, $p=0.000$) and team orientation (beta=0.226, $p=0.019$). While, innovation (beta=0.003, $p=0.969$) and attention to details (beta=0.139, $p=0.129$) were found to be insignificant. Since, failure to find a significant relationship between ABC success implementation

and innovation, attention to details indicating that objective 4 which attempted to test whether there is a significant relationship between ABC success implementation and organizational culture could only be partially supported.

6.1.2.5 Research Objective 5

Using one-way ANOVA test, the differences in ABC success among manufacturing firms adopting different strategy as stated in Hypothesis 5 were examined. It was shown that the different type of strategies did not have any significant effect on the success of ABC implementation in manufacturing firms in China. This may suggest that the ABC success is not influenced by the type of strategy that firms adopt. However, this result is not consistent with the argument of Gosselin (1997). In Gosselin's (1997) research, he found that prospectors facilitated technical innovation, while administrative innovation can be easier in analyzers. ABC as an administrative innovation can accomplish a higher level of success in analyzers. The result presents an unexpected finding, which could be due to the different contexts within which Gosselin's (1997) study is in Canadian context and this study is in Chinese context.

6.1.2.6 Research Objective 6

The final research objective is to test the direct relationship between ABC success and the firms' performance as stated in Hypothesis 6. The results of correlation ($r=0.339$, $p=0.000$) and regression ($\beta=0.339$, $p=0.000$) provide an overall support for hypothesis 6. It indicates a significant direct relationship between ABC success and firms' performance.

Similar results were found when the test was performed for the manufacturing and business performance. The results indicate that both components of firm's performance, namely, manufacturing performance ($r=0.192$, $p=0.049$) and business performance ($r=0.446$, $p=0.000$) were significantly correlated with ABC success respectively. The results are consistent with the finding of Ittner *et al.* (2002), who found a significant association between ABC success implementation and manufacturing performance.

However, the literature review does not show any empirical research about the relationship between ABC success and business performance. Up to date, there is only one empirical research conducted by Williams and Seaman *et al.* (2002) and Isa (2004) that examined the relationship between MACS change and business performance. As ABC can be considered as a revolutionary change in MACS, therefore the finding of this research is consistent with Isa *et al.*'s (2004) and Williams and Seaman's (2002) finding, who found moderate association between MACS and business performance. Table 6.1 provides a summary of the results for testing the research hypothesis:

Table 6.1: Summary Results for Hypothesis Testing

Research objectives	Hypothesis	Regression
Objective 1	Relationship between behavioral and organizational variables and ABC success	Marginally Supported
Objective 2	Relationship between technical problems and ABC success	Supported
Objective 3	Relationship between organizational structure and ABC success	Not Supported
Objective 4	Relationship between organizational Culture and ABC success	Marginally Supported
Objective 5	Differences in terms of ABC success among different type of strategies	Not Supported
Objective 6	Relationship between organizational ABC success and performance	Supported

6.2 Problems and Issues in ABC Implementation

This section highlights several problems or issues related to ABC implementation, and all these issues are discussed in two separate parts: the extent of ABC adoption, and the effect of ABC success on firms' performance.

6.2.1 Extent of ABC adoption

This study indicates that the local manufacturing firms in China are still at the early stage of ABC implementation. Only 33 out of 74 Chinese manufacturing firms reported that they fully adopted ABC to trace overheads to products or services. However, a majority of local Chinese firms (41 out of 74) adopted only certain concepts of ABC,

for example, adopting multiple allocation bases to trace overhead to products and allocating period costs, such as administrative expenses, and so on.

14 out of 74 local Chinese firms occasionally applied ABC system, and only 19 local Chinese firms can be considered to achieve the mature stage. This research also found that a few of local Chinese firms implemented ABC in the whole organization (13 out of 33), and ABC implementation was still mainly applied in the selected department (20 out of 33).

Furthermore, the finding also showed that respondents perceived that their firms increase the number of cost drivers (mean value=3.93) and also increase the proportion period expense allocated to final products (mean value=3.82). This finding provides the evidence that certain aspects of ABC system were moderately increased among Chinese local manufacturing firms.

The findings of this study which added to the evidence on the ABC implementation in China are consistent with previous research (Yanren *et al.* 2008). In their research, they found that only a small number of Chinese companies implemented the full ABC system to compute product costs, while some aspects of ABC as mentioned earlier were commonly adopted by Chinese firms, and these aspects have gained a higher level of popularity in the recent three years.

6.2.2 Effect of ABC Success on Firm's Performance

ABC success was found to be significantly related to the firms' manufacturing and business performance. The findings of this study indicate that if firms could implement

ABC successfully they can then achieve a higher level of manufacturing performance. This finding is consistent with Ittner *et al.*'s (2002) finding, which found that ABC are associated closely with the firms' manufacturing performance, such as higher quality level, greater reduction in cost and decrease in cycle time and so on. ABC success implementation could lead to the improvement in manufacturing performance. Value added and non-value added activities can be identified by information supplied by ABC. Non-value activities, such as checking, counting and reworking could be eliminated by using ABC information. Once non-value activities are eliminated, cost could be decreased, quality could be improved and lead time and customer waiting time could be reduced (Ittner *et al.*, 2002). Therefore, ABC success could eventually improve the firms manufacturing performance.

The findings of this research also indicate that a positive and significant relationship exist between ABC success and business performance. If ABC which is an important part of MACS can be successfully, then the business performance could be enhanced.

6.3 Implication for Theory and Practice

Several implications could be obtained from the findings of this research. This section presents the implications from both the theoretical and practical perspectives. The details of discussion are as follows.

6.3.1 Theoretical Perspective

For this study, the contingency model was employed as the basis of the research framework which is aimed to examine factors affecting ABC success implementation

in manufacturing firms operating in China and also to test the impact of ABC success on the firms' performance.

Previous studies, such as Shields (1995) examined the effects of behavioral and organizational variables, and technical variables on ABC success. Shield's (1995) model was extended by numerous research, such as Shields and McEwen (1996), Norris (1997), as well as Krumwiede and Roth (1997). This study also extends the past studies by examining a more comprehensive framework of ABC success. It examined the effects of organizational structure and corporate culture on ABC success, and the impact of ABC success on firms' performance, namely, manufacturing performance and business performance. The findings of this study provided evidence on the significant effects of organizational culture on ABC success and the effect of ABC success on the firms' performance. However, an insignificant relationship was found between ABC success and the organizational structure. Even though not all of the hypotheses were supported, the findings of this study nevertheless enhance our understanding of the factors influencing ABC success and its impact on manufacturing and business performance.

Most of the earlier studies on ABC implementation were conducted in the Western context. It might be possible that the role of the contextual factors in ABC success is different in another cultural context. Thus, this study contributes to the literature by providing evidence on ABC success factors in a non-western context, such as China. As China represents an Asian culture, this study adds further insights on the roles of these factors on ABC success within this cultural context.

6.3.2 Practical Perspective

The results obtained from this research provide explanations to the initial research questions of whether ABC is successfully implemented by manufacturing firms in China and the factors that influence its success. Through the process of survey questionnaires, it is firmly believed that this study has indirectly created an awareness of the ABC system among the respondents. In order to help the Chinese manufacturing firms to improve their costing system and to obtain more accurate costing information, this study attempted to provide some practical recommendations as follows:

Firstly, top management support was found to be the most crucial factor in determining whether the implementation of any management accounting and control system could be successful or not. In the case of ABC implementation, it can be argued that without the support from top management, ABC implementation is unlikely to be successful. Hence, it is necessary for top management to take the responsibilities to support ABC implementation, such as providing ABC implementation with visible supports, committing all the available resources to ABC, and taking ABC information as the basis for decision-making. This is consistent with the innovation literature, which states that in any innovation efforts, the leadership or top management plays the most critical role in increasing success (Walton & Susman, 1987; Hoffman & Hegarty, 1993; Scott & Bruce, 1994).

Chief Financial Officers, financial managers and accountants of manufacturing firms should share their knowledge of ABC systems with the owner(s) and explain in details what the ABC system is, how it can benefit their companies, the fundamentals of the ABC, its superiority to the traditional costing systems, and the effective application of

ABC. The Owners' understanding of what additional information is available from the ABC system and how that information should be used in decision making will further help them to succeed in their businesses.

Secondly, owners of firms, which produce multiple products or services, should be convinced to implement not only some aspects but the full concept of ABC because the ABC system is more effective in managing and reducing overhead costs, and thus, could improve profits. Not only the accountants but also the non-accountants should be regarded as the owners of this new system. Non-accountants should also get involved in the process of the design and implementation of the ABC. Accountants and non-accounting staff should consider recommending to owners to provide training programs for non-accountants to use ABC. This effort will help the companies to ensure that all employees have knowledge of ABC and its benefits. Eventually, it is hoped that the ABC system can be successfully implemented in manufacturing firms.

Thirdly, this study found an insignificant relationship between training and ABC success. China has a high uncertainty avoidance culture (Hofstede, 1983), thus, training is needed for Chinese firms as training could reduce the employees' feeling of being threatened (Brewer, 1998). A high uncertainty avoidance culture needs a higher level of training than that of a low uncertainty avoidance culture. Hence, top management of Chinese businesses should provide a higher level of training to design and implement ABC, use ABC, understand the benefits of ABC, as well as the need for the implementation of ABC compare to firms in Western countries, then the possibilities of ABC success can be increased.

Shields (1995) considered that ABC link to performance measure and evaluation, and non accounting ownership are the consequence of top management support. In this study, ABC link to performance measure and assessment, and non accounting ownership were not the significant factors in determining ABC success. Top management are advised to motivate employees to implement ABC by linking ABC to employees' performance evaluation, and also compensation system should be designed to motivate employees to use ABC. Once employees are motivated to use ABC, then the implementation of ABC can accomplish a higher level.

The finding of this research showed a positive but insignificant association between ABC success and centralized structure. Even though this finding was not significant, the direction of the relationship between centralization and ABC success implementation is consistent with Brewer's (1998) finding for the Malaysian sample. China is considered by Hofstede (1984) as a high powered distance country, and centralized structure is considered as dominant factors in influencing ABC success implementation among its firms. Therefore, to enhance the level of ABC success, Chinese firms should adopt a higher level of centralized structure and top down structure. Lana and Fei (2007) also found that centralization is important in implementing the ABC system in a Chinese state-owned firm.

The findings of this research indicate that the outcome orientation and team orientation cultural values influenced ABC success significantly. Hence, in order to increase the likelihood of ABC success among Chinese firms, the management of these firms must strive to create these cultures within their organizations through various training programs or other initiatives.

Finally, the findings of this research also provide inspirations to policy maker, government bodies and professional accounting organizations, such as China Institute Certified Public Accountant (CICPA), the government and the professional accounting bodies to find ways to create awareness of the recent development in management accounting system and issues by publishing the information through various channels. CICPA can provide various training courses to Chief Financial Officers or Financial Controllers, accounting supervisors about the benefits and objectives of ABC systems. Furthermore, the government and the manufacturing industry can also provide incentives to encourage more research in new management accounting practices in order to shed more information on the benefits and the barriers of ABC success and to find ways to make ABC success in the organization.

6.4 Limitations of the Study

As with any cross-sectional research, limitations do exist during the course of this study. The first limitation is related to completeness or quality of the responses from the questionnaire survey, as it was not possible for the researcher to personally administer all the questionnaires due to time constraints. This has caused some respondents not being able to fully answer the questionnaires as intended. For example, two respondents simply closed scale three (3) or neutral for all of the statements. The researcher had to follow-up and asked to conduct their permission for face-to-face interviews to further explain the ABC system.

The lack of understanding by the respondents presents another limitation to the study. On the other hand, some of the respondents were not able to answer and return questionnaires in time due to unexplained reasons.

The third limitation of this study is the low response rate of 10.6% and therefore conclusions could only be confined to those who replied the survey questionnaire, also the small sample size from the survey may also influence the application of SEM for data analysis in which a larger sample size is required.

The fourth limitation is that samples were only chosen from manufacturing industry. Therefore it does not apply to other industries and no inference is made on ABC success in other industries. It is possible that other types of industries such as merchandizing industries may have different views on ABC success and factors influencing ABC success.

The fifth limitation is that even through the targeted respondents is Chief Financial Officer (CFO) or Financial Controllers, however, some survey questionnaires were still filled in by finance managers, accounting supervisors or business analysts. Therefore their views on ABC success and its predictors maybe different than those of CFO or Financial Controllers and may not fairly reflect the standpoint of ABC success and its critical success factors. Also the knowledge of management accounting or management control system of finance managers, accounting supervisors or business analysts maybe limited.

Furthermore, during the early stage of ABC implementation in China, this study does not separate ABC fully adopters and ABC partially adopters, and also did not differentiate the different stage of ABC implementation, namely acceptance, routinization, and infusion. According to Krumwiede (1998a), that at different stage of

ABC the dominant factors in determining ABC success implementation are also different. Therefore, the accuracy of the research finding might be affected.

Finally, due to the low response rate, this study also does not differentiate the period of ABC implementation among respondents. In this research, 40 firms had more than 3 years of experience in implementing ABC system, while, 21 respondents reported they had been using ABC system in their firms less than 3 years. The period of ABC system is different, the perceived level of ABC success implementation might also be different.

6.5 Suggestions for Future Research

Future research should make an effort to fill in the gap that was outlined in the previous section. Future research could take some of the gaps related to methodological issues and theoretical perspectives into considerations, so that a more comprehensive framework of ABC success and its determinants could be obtained.

In this research, all the four main independent variables were able to explain 56.6 percent of the variance in the ABC success implementation among manufacturing firms operating in China and suggested that there could be other variables that could improve the explanatory power of the research model. Thus, additional variables should be added to the current model, which may explain more variation in the ABC success implementation.

In this study, the effect on the type of strategy on ABC success was taken as an additional test. As Chenhall (2003) found that there is a significant relationship between the type of strategy and management accounting system. Future research should adopt a more appropriate measure to measure strategy in order to confirm whether strategy affects ABC success.

In this study, the measure for organizational structure was adopted from Robbins's (1983) work, hence future research is recommended to employ other new measure which could measure centralization and formalization structure more accurately.

The national culture is another factor that could be taken into consideration by researchers. As Supitcha and Frederick (2001) argued that the successful accounting practices in one country need modification before it could be used effectively in another country. So the influence of national culture should not be ignored (Brewer, 1998). However, so far, studies concentrated only in one country, but a few comparative studies were done between two or more countries. According to Brewer (1998), the single country setting is impossible to examine the relationship between national culture and ABC success. Future research should conduct a comparative study between two countries.

Future research should make efforts to ensure that responses are obtained from targeted respondents, such as CFO or Financial Controllers, as they are supposed to take part in the design and implementation of ABC and other management accounting systems.

Therefore they should have the necessary information about ABC implementation, thus, interview survey maybe considered as an alternative survey method.

In order to overcome the shortage of low response rate in survey research, other data collection technique such as case study could be employed as a supplementary method. Previous studies also use both data collection technique, such as Maelah *et al.* (2006), who used survey method and a case study to examine the extent of ABC adoption in the Malaysian context. Also Chongruksut (2002) adopted the interview and survey method to examine factors influencing ABC success among Thai businesses.

Furthermore, in order to accurately investigate factors influencing ABC success implementation, future research should also concentrate on one particular stage of ABC implementation. According to Krumwiede (1998a) who categorized the stage of routinization and infusion as the mature stage of ABC implementation. Thus, it is suggested that future research should focus on mature the stage of ABC implementation. In addition, future studies should be conducted to choose the firms that have the same period of ABC implementation, such as the firms that have been using ABC for at least 3 years.

6.6 Conclusion

This research was pursued with the principle objective of understanding the factors that affect the success of ABC implementation among manufacturing firms in China.

This research revealed that the four determining factors which are behavioral and organizational variables, technical problems, organizational structure and culture were able to explain 57.1 percent of the variance in the ABC's implementation. Only behavioral and organizational variables, technical variables, and organizational culture significantly affect the ABC success implementation among manufacturing firms.

Among the sub components of each main variable, top management support, formalization structure, outcome orientation, and team orientation influenced ABC success significantly in the manufacturing firms in China.

This research also suggests that the level of ABC success does not vary among manufacturing firms in China that adopts different strategies. The result revealed that the level of ABC success implementation was similar to the companies that pursue different type of strategies, namely prospectors, defenders and analyzers.

The findings of this research enhance the understanding of factors influencing ABC success implementation in the Chinese context. Top management support, formalized structure, outcome orientation, as well as team orientation were found to be significantly related to ABC success implementation. Hence, in order to enhance the

level of ABC success implementation, Chinese firms should provide sufficient support to the implementation of ABC, adopt formalized structure, and create awareness of the team orientation and outcome orientation culture.

Furthermore, since China is moving from a “labour intensive economy” to a “modern industrialized nation”, thus, the importance of modern western management accounting techniques including Activity-Based Costing (ABC) should not be overlooked.