CHAPTER 7:
CONCLUSIONS

7.1   Introduction

Two major research objectives were examined within this study, with the purpose of providing an understanding of factors influencing the adoption of CRM and investigating the effect of CRM adoption on organisational performance within the services sector in Hong Kong. Using insights from previous literature and a qualitative study, a conceptual model was developed. The model captures factors expected to influence the CRM adoption as well as the impact. This model provided a more generalised view of the topic.

In the last chapter, the results of quantitative analysis were discussed. This chapter will summarise the findings of this study by linking the results of quantitative research with the definition of CRM defined in chapter 2, the antecedents and impacts of CRM adoption in chapter 3 identified from the literature review and exploratory interviews. Then, it will continue to describe the important insights this research has implied for both academic and practitioner literature. At the end, the limitations of the study in answering my research questions will be reported together with recommendations for future research.

7.2 Model development

Before discussing the results regarding each of the antecedents and impacts of the CRM adoption as well as their associations in the model, it is important to review the conceptual framework that was the focus of this study. In chapter 2, technology was found to be a very important element in the definition of CRM viewed by practitioners alongside the academic perspective of maintaining relationship with customers. In order to understand the drivers of CRM adoption, technology and innovation diffusion literature might help to understand CRM adoption as research was done to understand organisations' and individuals' adoption behavior as well as to identify the determinants of innovation in the past. After an evaluation of literature on innovation adoption, Roger's model was concluded as the most relevant framework for this study. However,, as Roger's diffusion of innovation model focused on end consumers, as a result, there is a need to extend the model to include B2B context in this study. After reviewing literature about the success of CRM implementation and innovation adoption decisions, it was discovered that some more factors could be added and they can be classified into two types 1) business related drivers (attitude towards change, market orientation, innovation orientation and organisational characteristics) and 2) environment related drivers (perceived accessibility of IT solutions, competition intensity and desire for customer intimacy). At the same time, the adoption of CRM was believed to affect the customer satisfaction, employee satisfaction and organisational performance according to literature. Information utilisation was believed be a mediator between the CRM adoption and its impacts because its role in processing the

information to understand and segment the customers.

Based on the research philosophy argued in this research, both qualitative and quantitative research was used. Qualitative research was used to reduce, refine and seek factors relative to the research objectives in order to assist in the development of theory and the formal testing of the model was undertaken through a questionnaire. Since the literature reviewed was not specifically applicable to the population and CRM implementation in question, the factors gathered may be inconsequential or incomplete. Therefore, there is a need to carry out the qualitative research. Moreover, it is important to understand the views of practitioners in Hong Kong in order to check whether my understanding about the research area from the literature is correct and whether the appropriate terms are being used to describe practitioners' thinking before developing the hypotheses. This would make sure that the questions could be developed in a way that the practitioners can understand in the quantitative stage.

By integrating the interview results with practitioners in the service sectors in Hong Kong with the information gathered from the literature review, 17 hypotheses were developed. Quantitative research was then carried out and sophisticated analysis approaches were used to test the hypotheses. The intention to measure the adoption of CRM was initially classified as adopters or non adopters. However, all respondents claimed that their organisations were using CRM but with different variation of engagement with CRM innovations during the qualitative interviews. Therefore, it was considered sensible to conceptualise adoption as a continuum ranging from no adoption,

through to basic low levels of engagement with CRM and on to higher levels of engagement with CRM. Accordingly it was considered essentially to be able to operationalize adoption based on the levels of engagement with CRM. Respondents would be asked to report the variation of CRM adoption or the levels of engagement with CRM from their point of views. Because of the difficulties in defining the variety levels of CRM adoption, it was decided that a scale of CRM adoption should be used to represent levels of engagement with CRM, as well as a simple direct "yes/no" question on the CRM usage to retain the possibility that the larger sample would enable the identification of firms that are genuine non adopters. Thus, CRM adoption was operationalised in two ways – as a binary adopt/non adopt and as a scale reflecting the levels of engagement with CRM. For the second of these, it was planned to use the scale of CRM adoption which was developed in Hong Kong by Sin *et al.* in 2005.

Both regression models and SEM were used to explore the relationship between CRM adoption and its drivers. In particular, the dependent variable - *CRM adoption* was treated as continuous scale during the estimation with multiple regression models and SEM by using the scale for measuring the levels of engagement with CRM. The items for measuring the constructs in the model are valid after performing the reliability and validity tests. By using SEM, all but two of the hypotheses were supported by the data. The devised model of this study is briefly exhibited in figure 7.1. Discussion of the results for each construct will then be presented.

Figure 7.1-Significant factors affecting degree of CRM adoption

Factors   **CRM adoption   Mediator**
Impacts

Attributes of innovation (from Rogers):

Relative advantage

Compatibility

Complexity

Trialability

Observability

Business-Related Antecedents:

Attitude towards change

Market orientation

Innovation orientation

Environment-Related Antecedents:

Perceived accessibility of IT solutions

Competition intensity

Desire of customer intimacy

Levels of engagement with CRM

Information utilisation

Customers' satisfaction

Employees' satisfaction

Business performance

* the box with dotted line denotes the extension to Roger's diffusion of innovation model

Multiple regression was performed when metric scale was used to represent the CRM adoption, logistic regression was performed when CRM adoption was treated as a binary variable and SEM was performed when CRM adoption takes into account each item on CRM adoption. It was found that some results of SEM overlapped with results of the regression analysis (Market Orientation and Attitude Towards Change). Although the way in defining the dependent variable is varied in different estimation methods, the consistency of the results suggested that the overlapped independent

variables are relevant irrespective of how CRM adoption is measured. Building on the results found by regression model, SEM even suggested more significant drivers. Since SEM is a more powerful tool to validate the measurement instruments as well as to test the hypothesised relationship in a model, therefore, the results of SEM are concluded to be the final result. In the results of SEM, factors tested but concluded not to be significant for the levels of engagement with CRM include organisational group culture and organisational characteristics. Hence, the results suggest that Rogers' diffusion of innovation framework by itself is not enough to explain the adoption situation of CRM in Hong Kong. Other factors related to the business and environment should also be included.

7.2.1 Results on Antecedents of CRM adoption
7.2.1.1 Attributes of innovation adoption

CRM adoption was regarded as an innovation in this research. According to Rogers (1962), the perceived characteristics of the innovation include relative advantage, compatibility, complexity, trialability and observability. Other researchers such as Akbulut (2002) also reported that the complexity of a technology is a major factor that affects adoption decisions, and Tornatzky and Fleischer (1990) stated that fit of the available technology with the organisation's existing technologies plays an important role in the technology adoption decision. Ideas similar to those found in the literature had also emerged during the exploratory interviews. From the interviews, the majority of the respondents expect customer retention and profits will be increased after the adoption of CRM. It was also found that respondents considered adopting CRM as they thought that it could easily be tried in their

companies. It was also discovered that the respondent companies considered adopting CRM as they have observed the benefits of CRM from competitors when they talked about competition in their industry. Moreover, the SEM analysis indicated that these five attributes were significant determinants of the levels of engagement with CRM. Hence, the findings support prior research and suggest that higher levels of relative advantage, compatibility, trialability and observability tend to encourage a more complex higher levels engagement with CRM. On the other hand, higher levels of complexity tend to discourage the levels of engagement with CRM.

7.2.1.2 Business related antecedents
i. Attitude towards change of top management

The results of this study are consistent with the idea put across in the literature that attitude towards change of top management is considered as a driver of innovation decision. As hypothesised, the levels of engagement with CRM is higher if the managers' attitude towards change is more positive. This was reflected by the SEM analysis, showing that attitude towards change of top management is a significant factor affecting the levels of engagement with CRMin the model. These results are in line with the qualitative data gathered in the exploratory interviews. Hence, the findings support prior research and suggest that there is a relationship between attitude towards change and the levels of engagement with CRM.

ii. Market orientation

Based on this study's results, market orientation was also developed according to what had been hypothesised. According to Narver and Slater

(1990), market orientation consists of three behavioural components: customer orientation, competitor orientation, and interfunctional coordination. As expected, the higher the market orientation, the higher the levels of engagement with CRM. The SEM analysis indicated the significant relationship between the levels of engagement with CRM and market orientation. The results are consistent with the idea given by the practitioners during the exploratory interviews. Participants explicitly mentioned market orientation and customer orientation as factors affecting CRM adoption in the company.

iii. Innovation orientation

Siguaw *et al*. (2006) offered a definition on innovation orientation as "a multidimensional knowledge structure composed of a learning philosophy, strategic direction, and transfunctional beliefs that in turn, guide and direct all organizational strategies and actions, including those embedded in the formal and informal systems, behaviors, competencies, and processes of the firm to promote innovative thinking and facilitate successful development, evolution and execution of innovations". According to the literature, innovation orientation is considered as a strategic plan that provides direction for organisations to adopt innovation faster. In the SEM analysis, the results showed that innovation orientation is significant in influencing the levels of engagement with CRM. Hence, this suggests that the higher innovation orientation, the higher the levels of engagement with CRM.

iv. Organisation group culture

Organisation group culture stresses the value of employee unity, cooperation and sense of belonging to the firm, encourages employees' understanding of both the firm and market, and supports participation in decision making (Quinn, 1988). When performing regression models, significant impact of group culture on the levels of engagement with CRM was found. However, weak association between group culture and the levels of engagement with CRM was found by using SEM analysis. Since it is suggested that organisation group culture is a driver of CRM adoption in both the literature and exploratory interviews, therefore, this construct should be further investigated.

v. Organisational characteristics

According to the literature, size of organisation is believed to affect the levels of engagement with CRM as it is reasonable to expect large firms to adopt an innovation before small firms, particularly if there are economies of scale in the use of the innovation (Kimberly and Evanisko, 1981; Brown, 1981). At the same time, the age of the organisation may negatively influence the degree to which new ideas and products are welcomed by the firm (Lancaster and Taylor, 1988). However, the relationship is rejected by the results of SEM analysis by showing the insignificant associations between these two constructs and the levels of engagement with CRM.

7.2.1.3 Environment related antecedents

i. Perceived accessibility of IT solutions

The results of this study are consistent with the ideas gathered from the exploratory interviews. The interviewees stressed that the IT solutions available in the business environment play a critical role in running the CRM programme especially for the targeting and segmentation characteristics of CRM. As hypothesised, the higher the perceived accessibility of CRM related IT solutions, the higher the levels of engagement with CRM. The results were indicated by the significant relationship between the perceived accessibility of IT solutions and the levels of engagement with CRM.

ii. Competition intensity

In the literature, Boone (2001) showed that the intensity of competition affects the incentives to innovate when he analysed the effects of the intensity of product market competition on R&D incentives. This is consistent with the views of the participants that they need to adopt CRM so as to stay competitive and to gain profits. This was supported by the results of the SEM analysis regarding the hypothesised link between competition intensity and levels of engagement with CRM. The significant results suggest that the more intense the firm's competitive environment, the higher the levels of engagement with CRM.

iii. Desire for customer intimacy

The findings are consistent with the pattern that emerged from the qualitative analysis. The relationship of this construct and the levels of engagement with CRM is strongly supported by the practices of several

organisations included in the exploratory interviews. As there is lack of literature relating to the desire of customer intimacy with the levels of engagement with CRM, the significant relationship found from the SEM analysis contributes to the literature that the levels of engagement with CRM is higher if companies desire to create stronger customer intimacy.

7.2.1.4 Mediating effect – Information utilisation

Competing models including information utilisation as a mediating role between CRM adoption and organisational performance was compared with the model without information utilisation in this study. Given that the results of SEM analysis support the mediating relationship, information utilisation was found to be a mediator between the levels of engagement with CRMand organisational performance. The results support the ideas which emerged from the qualitative analysis. Practitioners confirm that information processing and utilisation are very important to CRM adoption.

7.2.1.5 Consequences of CRM adoption

Customer satisfaction, business returns and employee satisfaction were described as the impacts of CRM adoption by the respondents in the exploratory interviews and literature. Therefore, they were put in the model for assessing the impact of levels of engagement with CRM in this study. The results were encouraging and provided support on the findings of the interview results. As predicted, the higher the levels of engagement with CRM leads to increase in customer satisfaction, the stronger employees' satisfaction and the better business performance. In this study, customer satisfaction includes satisfaction of customer and customer retention,

employee satisfaction includes job satisfaction and employee commitment and business performance means returns and relative performance to competitors. The results were indicated by the significant relationships shown by the SEM analysis.

Overall, the results of the quantitative analysis provided important evidence for the conceptual model. Consequently, this research suggests important insights for both practitioners and researchers, as detailed in the next section.

7.3 Study implications

Organisations need to identify, acquire and retain customers, to understand what they want, and to develop customer loyalty in order to maintain and increase profits. CRM systems accomplish this task by consolidating information from all customer touch points into a central repository accessible by all business areas. CRM enables customers to interact with the business in an individualised, need-specific manner, and includes processes to bring together information about both the customer and the business. For instance, some retail companies will send messages to each individual customer in their database through mobile phones so as to let customers know their news and also to let them find out that the companies know their specific needs. By doing so, they are inviting their customers to make re-purchases and increase the level of customer loyalty.

Despite all these instances of practical uses in many business sectors, the main factors that really affect the adoption of CRM are seldom explored within the available literature. Hence, the results of this research fulfill a gap in the literature by answering the research questions set up in this study. The implications of this study would be helpful to managers in firms adopting CRM for strengthening their CRM adoption and to managers in firms who are trying or planning to market CRM system. In particular, organisations wishing to proceed with the adoption of CRM in any of their organisational processes would be able to address their main concerns by looking at some of the data found in this research. Moreover, managers may refer to these results before deciding on which areas to focus when setting up their marketing strategies

The first implication of this study is in providing empirically based insights into factors that are likely to affect CRM adoption. Both business and environment related factors are considered together with attributes of innovation as the drivers of CRM adoption. This research also contributes to the literature by providing some insights on the impact of CRM adoption.

Second, this study confirmed the need to consider CRM adoption as an *innovation adoption* of CRM because it contains technology focused characteristics and is new to organisations which have not adopted before. This work extends the previous innovation adoption model especially in B2B situations by combining the business situation – top management's attitude towards change, group culture, market and innovation orientation as, the environmental situation – IT solution, perceived competition environment

and customers' desires on intimacy and attributes of innovation proposed by Rogers (1962) as the conceptual framework. The integrated framework enhances the understanding of CRM adoption in the marketing literature.

It is interesting to note that the CRM adoption is affected by business and environmental factors. As mentioned earlier, the CRM adoption (measured by levels of engagement with CRM) was found to be influenced by attributes of innovation including relative advantage, compatibility, complexity, trialability and observability. The results demonstrated that seeing an advantage in adopting CRM would lead to an increase in the likelihood of adopting it. CRM is often marketed as being advantageous in that its implementation can result in customer satisfaction and customer retention. The findings also provide evidence for the role of market and innovation orientation in the intention to adopt CRM. Results confirm that top management's attitude towards change, IT solution perceived, competition environment and customers' desire on intimacy play a strong role in the adoption of CRM. Furthermore, information utilisation was found to be significant in enhancing the relationship between CRM adoption and organisational performance — customer satisfaction, employees' satisfaction and business returns.

Before the actual quantitative study, a small scale exploratory study was conducted. These exploratory interviews formed much of the basis of this further research. Besides, the results of the study seem to confirm most of the exploratory interview findings. In particular, the quantitative study confirms that innovation orientation is the determinant of CRM adoption

which was not directly mentioned by the interviewees during interviews. By gaining insights into the determinants of CRM adoption, companies can more adequately formulate the marketing strategy in order to improve their organisational performance. Thus, from a managerial perspective, these results emphasise that organisations have to consider giving more support towards the change from top management, rising market and innovation orientation, having a better perception of IT solutions, increasing competitiveness and keeping more intimate relationships with customers so as to have a more complex higher levels of engagement with CRM. With the higher levels engagement with CRM, the customer satisfaction, employees' satisfaction and returns will also increase.

Group culture and organisational characteristics were not significant during analysis. It seems that these two factors are not perceived as important within the study population. It is possible that the non significant relationship of group culture is due to self-report bias. In the survey, the information was collected based on the self-reported answers, therefore, what the individuals understand or feel about the culture of their firms may affect the degree of agreement to the questions. Hence, errors may exist in the reported responses to the questions. Moreover, according to the observations in the qualitative interviews, adoption of CRM occurred in both small and large companies as well as in new and old companies, that may be why the organizational characteristics were found insignificant in affecting the CRM adoption.

Third, to illustrate with some convincing arguments, this research was conducted using a combination of qualitative and quantitative methodology which can provide an in-depth understanding of CRM adoption. To study the CRM adoption in a south-east Asian setting, this research was conducted in Hong Kong.

This study provides a conceptual framework for CRM adoption and identifies key drivers for the adoption and its effect. It makes a contribution to the limited literature on the adoption of CRM issues which offers practitioners insight into the development and implementation of CRM.

Whilst the above discussion on the implications of the study is not all embracing, it serves to highlight key contributions to the current understanding of CRM adoption in the services sector in Hong Kong. More research is required to fully understand the topic and this is now detailed in the final section of the thesis.

7.4 Limitations and future research direction

Even though this thesis has provided a detailed examination of the factors affecting the CRM adoption, it still has its limitations. In this final section of the thesis, these limitations are recognised and future research suggested.

First, although a comprehensive examination on research objectives was performed to find out the factors influencing CRM adoption and the effect of CRM adoption on organisational performance based on a reasonable rate of responses, there were insufficient cases to provide validation of the

resultant model. A common means of assessing a model is to apply it to a portion of data set aside during the sampling stage. If the model is valid, it should work for this reserved sample as well as for the sample used to construct the model. However, as the sample size in this survey is not very large and all cases have to be put in the analysis, therefore, no sample could be kept for validation purpose. As a result, future research needs to have a greater sample size to replicate this survey using a different sample of companies in the services sector to validate these findings. Moreover, an obvious future research topic would involve obtaining more high engagement adopters and low engagement adopters so as to refine and test the model. This will probably help to look into the variation of engagement with CRM in the industries.

Second, although half of the respondents defined themselves as non adopters in the quantitative survey, it is not clear that they classify themselves correctly. During the qualitative stage, it was found that participants were not willing to classify themselves as non adopters. As a result, some other ways in classifying organizations into adopters and non adopters could be found in order to avoid error in segmentation.

Third, because of the obvious financial and time restraints, together with the excessive logistics involved in obtaining access to qualitative study participants, the sample size in the qualitative approach is barely enough for this research purpose. Nevertheless, such research would benefit from extensive qualitative interviews such as with more industries and companies of different management styles to serve as a foundation for the conceptual

model developed in this thesis.

In addition, it was noted that measurement of certain items in the questionnaire did not work as well as expected as some values for AGFI fall below the 0.9 threshold and some values of RMSEA are above the normal 0.05 cut-off during the estimation of confirmatory factor analysis. It is suggested that future studies should focus on refining the proposed scales to include larger, probabilistically selected samples.

Whilst group culture seems to be a stimulating factor for CRM adoption in literature and exploratory interviews, it was found not to be significant in explaining CRM adoption. In other words, it is not likely to be a predictor of intention to adopt CRM.   It may be related to the industries included in the samples. Therefore, future research should examine this factor with respect to more industries. Moreover, future research should develop a series of models examining the relationship between the constructs for different industries and even different sectors. In this case, it will be possible to assess if there are any differences on the drivers and effects of CRM adoption across different industries and sectors. For instance, retail industries directly dealing with customers might have different CRM adoption mechanisms compared to the larger manufacturing industries.

The situation of CRM adoption was determined at the time the respondent completed the questionnaire. However, it would have been useful to observe over a period of time to determine the degree of adoption because the situation may be different from collected opinions based on perceptions.

Future research would benefit from a longitudinal approach in examining the degree of adoption as well the drivers of adoption.

Furthermore, the measure of the levels of engagement with CRM to represent CRM adoption in this research was determined by a set of questions proposed by a researcher in Hong Kong. Due to the changing times and differences in culture, it would be better to validate those questions and even develop more measures to assess the levels of engagement with CRM in future research.

Information utilisation was found to have a mediating effect between CRM adoption and organisational performance. More work in this area is required to determine whether there is any other mediator that could enhance the effect of CRM adoption on organisational performance. At the same time, there could be other factors affecting CRM adoption in other sectors in Hong Kong or in other countries, such as resource constraints, which warrant future investigation.

Finally, the research questions in this study were only verified in Hong Kong. It would be valuable to also test this model in other countries in order to find out if there is a need to extend the framework which is specific to the particular countries or cities.

7.5 Conclusion

In summary, due to little research having been done in building up models relating to factors of CRM adoption and the adoption of CRM as well as the impact of CRM adoption, this research makes a significant contribution to the service sector by filling this gap in modelling the decisions and behavior of business organisations of the service sector in Hong Kong. The model developed in this research provides a framework for further conceptual and empirical research on CRM adoption and its implications for marketing. It has provided a set of constructs to examine the research objectives. This study also illustrates that CRM adoption has had an impact on business benefits.

Existing ICT adoption literature fails to inspect the CRM adoption issue because it is too specific to technology or advanced products. This study has shown that CRM adoption is an innovation for which initial and advanced adoptions are influenced by a set of innovation attributes, and business related and environmental related factors.

Finally, although there are a number of academic papers examining issues related to CRM adoption, there are still gaps and a lack of empirical studies in understanding why CRM is adopted and its performance once adopted. These questions are important to practitioners in the services sector. It is suggested that future research should continue to investigate these issues by considering the limitations discussed.