CHAPTER 3:
ANTECEDENTS AND CONSEQUENCES OF CRM ADOPTION

3.1 Introduction

The previous chapter began a review of the literature on CRM paying particular attention to existing definitions of RM and CRM and propose a definition of CRM suitable for this research. In reviewing this literature a number of gaps in the current understanding of CRM were identified.   This chapter continues the review of the literature and aims to explore these gaps in more detail and addresses two questions: 1) Why do organisations differ in the degree to which they adopt CRM? and 2) What effect does CRM adoption have on customers, employees or business performance? Although these questions are very important, nonetheless, there seems to be a shortage of academic literature in this area.

According to Boulding *et al.* (2005), CRM represents an evolution beyond the existing idea. They posit that CRM goes beyond existing ideas as CRM includes the integration of all activities across the firm, linking these activities to both firm and customer value, extending this integration along the value chain and developing the capability of integrating these activities across the network of firms that collaborate to generate customer value while creating shareholder value for the firm. In addition, due to the newness to organisations which have not adopted before and the technology aspect of the CRM definition, CRM is viewed as an innovation in this research. Hence, technology and innovation diffusion literature was reviewed and the existing frameworks for innovation adoption provide a valuable starting

point in developing a conceptual framework for this research. During the review of literature, a range of potential antecedents to CRM adoption were identified and they have been grouped into business-related and environment related antecedents.

Finally, impacts of CRM adoption will be discussed in this chapter because the impacts were not researched extensively in the past. The conceptual model for this research will then be developed in the next chapter by integrating the materials discovered in this chapter.

3.2 Antecedents to CRM adoption

As mentioned in the previous chapter, there is little published research that explicitly and systematically analyses the factors affecting CRM adoption. As a result, investigation on the antecedents leading to the adoption of CRM would contribute to research by fulfilling that gap in the literature. Hence, this raises the questions of why some firms adopt CRM and some do not and more generally, why some firms engage in CRM in the true sense and why some firms are engaged in only a very limited sense. This effectively raises the question of what influences the adoption of CRM.

In order to explore the factors affecting CRM adoption, it would be helpful to take a look at literature about diffusion. Technology dimension is very important in the definition of CRM defined in chapter 2 besides the basic concept of maintaining customers in a long-run. In addition, CRM is a relatively new concept and may reasonably be regarded as an innovation, particularly so for the companies in the business market which have not

adopted it. The word "innovation" is derived from the Latin word novus or "new", and is alternately defined as "a new idea, method or device" or "the process of introducing something new". In 1962, Rogers defined "innovation as an idea, practice or object that is perceived as new by an individual or other unit of adoption. The perceived newness of the idea for the individual determines his or her reaction to it. If the idea seems new to the individual, it is an innovation". Drucker (1985) defined innovation as "the specific tool of entrepreneurs, the means by which they exploit change as an opportunity for a different business or service." Bertz (1997) assumed that innovation is to introduce a new product, process or service into the marketplace. Tidd, Bessant and Pavitt (1977) defined innovation as "a process of turning opportunity into new ideas and putting these into widely used practice." Afuah (1998) proposed that innovation is the use of new technical and administrative knowledge to offer a new product or service to customers. Therefore, it can be concluded that innovation is practices including products, equipments, processes, projects, policies and services that are new to organizations (Kimberley and Evanisko, 1981; Damanpour, 1991). In the past, research was done to understand organisations' and individuals' adoption behaviour as well as to identify the determinants of innovation. Therefore, technology and innovation diffusion literature might help to understand CRM adoption in general terms.

The potential antecedents of CRM adoption are going to be discussed within this section. In the following sub section, an overview on different existing frameworks on technology and innovation diffusion will first be given. Established theoretical frameworks are used in helping to understand the

antecedents as those frameworks are assumed to be generalizable.

3.2.1 Technology and innovation diffusion literature

As CRM is viewed as an innovation with a technology dimension and the number of studies on the adoption of CRM is small, therefore, the review of adoption of technologies or innovation will aid understanding of CRM adoption. Hence, literature on Information Communications Technology (ICT) adoption and some existing research frameworks such as Technology Acceptance model (TAM), Theory of Planned Behavior (TPB) and Diffusion of Innovation theory could be considered to provide theoretical frameworks to explain CRM adoption. The use of each type of model or theory in previous research will be outlined and evaluated in this section.

ICT literature will first be evaluated, and then there will be a brief review of literature on TAM, TPB models. Finally, the literature on diffusion of innovation will be examined. In general, all information and communication innovations are known collectively as ICT. The summary of the literature on ICT in the past ten years is listed in table 3.1. The literature could be divided into two major types. The first type is about the use of new hardware (PDA, ATM and mobile), the second type is about the use of internet (website, electronic banking and electronic commerce). Within the two types of research, case study, in-depth interviews, focus groups and survey have been conducted to collect information. The first type of the ICT research proposed that *social learning and consumer experience* are key factors of adoption. *Company size, competition in ICT supply, government influence, competitive environment and technology readiness* are considered to be relevant to the adoption in the second type of ICT research. The factors

suggested in those literature provide a benchmark for further investigations into the antecedents of CRM adoption. For example, competitive environment and technology readiness may be a factor of CRM adoption because of the technology dimension in CRM. Literature about other innovation adoption models, diffusion of innovation theory and CRM will be investigated later so that most relevant factors could be used in the conceptual framework of CRM adoption.

Table 3.1 - Literature based on models for ICT adoption

Study	Innovation considered	Methodology
Antonides *et al.* (1999)	ATMs	Case study
Auger and Gallauger (1997)	Internet based sales presence	Survey
Corbitt (2000)	Adoption of electronic commerce	Ethnography
Dandridge and Levenbury (2000)	Internet	Survey
Domegan (1996)	IT	Survey
Dos Santos and Peffers (1998)	ATM	Survey
Drury and Farhoomand (1996)	EDI	Survey
Efe and Adogbeji (2006)	Data storage and information dissemination	Survey
Erja and Kalle (2003)	Information system process	Case study- longitudinal analysis
Frambach *et al.* (1998)*	Electronic banking	Survey
Gatignon and Robertson (1989)	IT	Survey
Gharavi *et al.* (2004)	IT in stockbroking industry	Ecological approach
Gilbert and Han (2005)	Mobile data services	Focus groups, survey

Study	Innovation considered	Methodology
Hamill and Gregory (1997)	Internet	Survey
Holmes and Srivastava (1999)	Electronic Data Interchange	Survey
Howcroft and Mitev (2000)	Internet	Survey, In-depth interviews
Houghton and Winklhofer (2002)*	Website and Ecommerce	In-depth interviews
Lockett and Littler (1997)*	Direct banking services	Focus groups, survey
Lynn *et al.* (2002)	WWW in Marketing	Survey
Maria (2003)	Technological innovations like TV, PDA	Survey
Martinez-Sanchez *et al.* (2006)	Teleworking	Case study and survey
Parasuraman (2002)	Technology based customer interaction	Survey
Thong (1999)*	IT	Survey

* denotes the research that has extended Rogers' diffusion of innovation theory (the theory will be introduced and explained separately later in this section)

Besides the reference on ICT adoption, there are other theoretical models related to innovation adoption include the theory of reasoned action (TRA) (Ajzen and Fishbein, 1980), the theory of planned behavior (TPB) (Ajzen and Madden, 1986), the technology acceptance model (TAM) (Davis, 1989) and most recently, the notion of technology readiness (Parasuraman, 2002). According to TRA theory, the behavioural intention can be explained by the attitude towards behaviour and subjective norm. TRA has been used to

explain the behaviour beyond the acceptance of technology and four notions are included: behavioural attitudes, subjective norms, intention to use and actual use. TRA emphasises that individuals' behaviour can be predicted from their intentions, which can be predicted from their attitudes and subjective norms. Attitudes can be predicted from an individual's beliefs about the consequences of the behaviour. Subjective norms can be predicted by knowing what respondents believe significant others think about the behaviour in question. A particularly helpful aspect of TRA from a technology perspective is its assertion that any other factors that influence behaviour do so only indirectly by influencing attitude and subjective norms. Such variables include the system design characteristics, user characteristics (including cognitive styles and other personality variables) and task characteristics. Hence, TRA is quite appropriate in the context of predicting the behaviour of using multimedia technology. According to TPB, people's actions are determined by their intentions and influenced by attitudes towards behaviour, subjective norms and perceptions of behavioural control. TPB was proposed as *an extension of TRA*, it effectively explains individual intentions and behaviour in adopting new information technologies such as acceptance of electronic brokerage services but includes the additional factor of perceived behavioural control which relates to the individual's ability to perform the behaviour under consideration. TAM was originally developed by Davis (1986) to predict the acceptance and use of new information technology within organisations. *It is also based on TRA* and is described as "an analytical simplification of how functionality and interface characteristics are related to adoption decisions" (Deng *et al.*, 2005: 746). According to TAM, perceived usefulness (i.e. "the prospective

user's subjective probability that using a specific application system will increase his or her job performance within an organizational context") and perceived ease of use (i.e. "the degree to which the prospective user expects the target system to be free of effort") are considered to be the major determinants of technology acceptance behaviours. It is posited that attitude towards using a new information system is determined by users' perceptions of usefulness and ease of use of the system and that attitude towards using the system is the key determinant of behavioural intention to use, which ultimately determines actual system use.

In fact, TPB and TRA can be used to predict behaviour of any sort based on attitudes and subjective norms with TPB also including perceived behavioural control. TAM focuses specifically on technology. These frameworks have been used to understand the adoption of innovations in a variety of different contexts, For example, Scott (2001) has used TPB to expand the understanding of the factors that predict the intent of managers to use Information Technology (IT) certification as a selection tool when hiring to fill IT positions. McAllister (2003) studied the factors affecting e-business in the aerospace industry using the TRA model. In 2005, Mao *et al.* tested the TAM model to study mobile phone services' adoption and acceptance issues on their impact on business. In 2006, McKechnie *et al.* and Carayannis and Turner (2006) applied the TAM model to the online retailing of financial services and to the Public Key Infrastructure (PKI) technology respectively.

TRA and TPB are very general and very widely used models but arguably, their weakness is that they deal with generic behaviour rather than specifically addressing the challenges associated with the adoption of innovations. In practice, both can be applied to examine decision making with respect to any sort of behaviour, not just adoption of an innovation. In contrast, TAM and technology readiness are also widely used but are possibly too narrow in that they focus very specifically on technology and may be less able to accommodate the broader non-technology aspects of innovations. Moreover, both have typically focused on consumer adoption of new technologies rather than organisational adoption. In considering an appropriate theoretical framework, there is a tension between selecting one which may be very specific (TAM/TRA) and one which may be very general (TRA/TPB). This tension is particularly apparent in this case, because although the behaviour under consideration – adoption of an innovation – does have a technology dimension, the discussion in the previous chapter highlighted the fact that CRM is more then just technology. This would imply that TPB/TRA is likely to be more appropriate than TAM/TRA. But the generality of TRA/TPB – for example in simply specifying attitudes as an antecedent – provides rather limited guidance for the development of the conceptual framework.

The theory of diffusion of innovations developed by Rogers' (1962) is the most widely accepted academic work on innovation adoption which can be generally applied to a variety of innovations. It has been adapted and has evolved to serve technological innovation study throughout many decades, and across both consumer and business areas. The model is based around

the innovation adoption process defined by him as "the process through which an individual or other decision-maker unit passes from first knowledge of an innovation, to forming an attitude towards the innovation, to a decision to adopt or reject, to implementation of the new ideas and to confirmation of this decision."

Each of the stages in his model is now briefly described. During the knowledge stage the user is exposed to information about the innovation including how it operates. Factors that influence this stage include previous practice, needs and wants, innovativeness of the individual and norms of the social system. In the persuasion stage the "individual becomes more psychologically involved with the innovation" and dynamically hunts for information. Using the perceived characteristics or constructs of the innovation: *relative advantage, compatibility, complexity, trialability and observability*, the individual forms a judgment about the innovation. At the end of the decision stage, the individual decides whether to adopt or reject the innovation. When the innovation is used, implementation occurs. Finally, at the confirmation stage individuals continue to seek information to strengthen the innovation adoption decision and reduce dissonance.

In addition to the theory of market innovations, Rogers (1962) provides a model of adoption rates, because not all individuals adopt an innovation simultaneously, and a method of categorising adopters. Rogers distinguishes five "ideal" categories of individuals: innovators, early adopters, early majority, late majority and laggards. A sixth category exists as those that never adopt the innovation. Time is an important element of

the diffusion process, used to distinguish early and late adopters and understand the speed of innovation diffusion.

The major focus in this thesis is to identify the variables which determine the degree of sophistication in adoption of CRM in the market. Arguably, diffusion theory can give more insights concerning this matter when compared to TRA, TPB, TAM and TR as this latter group of models have tended to see the decisions in question as fundamentally binary (even if operationalised as scalar variables). Clearly, Rogers' model (especially the part about the persuasion stage) offers a concrete framework for study of the adoption of CRM and about the antecedents as it focuses on the perceived characteristics or attributes of the innovation.

In the literature, there is consensus on the fact that adoption of an innovation can be influenced by the characteristics of that innovation (i.e. the way which it is perceived). Subsequent researchers have provided or discussed alternative news of adoption attributes. However, nearly all of those studies incorporated innovation attributes proposed by Rogers (1962). The following are the definitions of the five constructs used to evaluate the perceived attributes of an innovation:
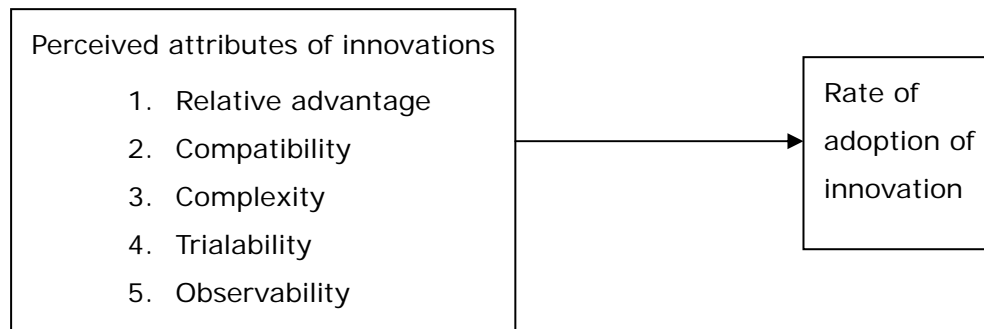
i. Relative advantage is the degree to which an innovation is perceived as better than the idea it supersedes. The degree of relative advantage may be measured in economic terms, but social prestige, convenience, and satisfaction are also important factors. The greater the perceived relative advantage of an innovation, the more rapid its rate of adoption will be.

ii.   Compatibility is the degree to which an innovation is perceived as being consistent with the existing values, past experiences, and needs of potential adopters. The more compatible of the innovation, the greater the likelihood of adoption.

iii. Complexity is the degree to which an innovation is perceived as difficult to understand and use. New ideas that are simpler to understand are adopted more rapidly than innovations that require the adaptor to develop new skills and understandings.

iv.   Trialability is the degree to which an innovation may be experimented with on a limited basis. New ideas that can be tried with any way will generally be adopted more quickly than innovations that are not.

v.   Observability is the degree to which the results of an innovation are visible to others. The easier it is for individuals to see the results of an innovation, the more likely they are to adopt it.

Figure 3.1 - Rogers' diffusion of innovation model

Variables Determining the
Rate of adoption   Dependent
variable

Perceived attributes of innovations
1. Relative advantage
2. Compatibility
3. Complexity
4. Trialability
5. Observability

Rate of adoption of innovation

Again, CRM is regarded as a process or strategy in this research. Therefore, Rogers' diffusion of innovation model should be the most suitable to be applied in this study as his proposed attributes of innovation are more general for innovative strategy as well as IT. Hence, the five attributes – Relative Advantage, Compatibility, Complexity, Trialability and Observability, become the antecedents of CRM adoption.

In research on the adoption of innovations, much of which was consumer based (Owen *et al.*, 2002; Tan, 1994) the traditional approach had been to see adoption as being driven by the characteristics of individual consumers. While such approaches yielded important insights, it was found that they did not fully explain the adoption decision and increasingly, studies on adoption either replaced or augmented individual characteristics with Rogers' (1962) perceived attributes of innovation. Thus, for example, in 1990, Thompson and Rao applied Rogers' model to investigate the relationship between consumer behaviour measures and the intention to use a closed-panel

prepaid health care plan. Their findings showed that Rogers' model is valuable in explaining the relationship. Lockett and Littler (1997) combined individual characteristics with perceived attributes of innovation to examine the adoption of telephone banking in the UK. Cheng *et al.* (2004) investigated the Diffusion of Online Games by applying Rogers' Diffusion of Innovation Theory successfully. The theory can be applied to predict the personalities of online gamers. He *et al.* (2006) developed their conceptual framework on the adoption of online e-payment by applying Rogers' model. It was discovered that compatibility has significant influence in online e-payment adoption. The above studies focused on end consumers, although the model has been applied in a B2B context by Houghton and Winklhofer who developed a conceptual model for internet adoption in exporting SMEs. In conclusion, researchers are particularly interested in the factors that affect the adoption of innovations. Innovation diffusion theory is used frequently to evaluate the effect of perceived innovation attributes and the adoption of innovations. The explanatory power of perceived innovation attributes varies across different innovations.

It can be seen that the adoption studies mainly focused on end consumers. Literature on B2C initially focused on personal characteristics, similar to Rogers' model on diffusion of innovation. The decision making process of end consumers for adoption might be considered relatively straightforward. Individual consumers have a considerably easier task in terms of deciding to use a product or service compared to a company where the decisions are made through an objective and systematic process. In a B2B context, the decision making process is typically more complex as there is often more

than one decision-maker involved in a B2B sale on the buyer's side. Moreover, research in the case of end consumers has tended to suggest that the best results arise when models combine the attributes of the innovation with the personal characteristics of the individual. Accordingly, at this stage in thinking about the development of a framework for organisational adoption of CRM it would seem sensible to include both individual attributes and the characteristics of innovation. It therefore implied that there may be a need to extend Rogers' model in this study, I will go on to look at the antecedents specifically identified in B2B contexts.

In 2002, when Houghton and Winklhofer studied the adoption of the internet in organisation (which was a kind of technology orientation or innovation at that time), they put forward a model in order to understand the extent of the internet adoption process by investigating the influencing factors of the adoption. They acknowledged the innovation characteristics proposed by Rogers in 1962 and extended previous work on internet adoption by including other factors. They presented the factors affecting internet adoption by combining the effects of demand-side (within organisation) and supply-side (external to an organisation) which had a B2B focus. Supply-side factors would include resources or IT knowledge. Also, when Huang and Chou (2004) investigated the factors of web mining adoption for small and medium size enterprises (SMEs) in terms of innovation theories, they also divided the factors into internal factors (including company size, age etc.) and external factors (perceived competitive pressure and perceived technological benefits). Thus, their work forms a very useful reference from which to develop the CRM adoption model.

Again, CRM is argued as an innovation with a technology dimension according to the definition defined in chapter 2. Because of this dimension, more antecedents of most relevance were identified besides the attributes of innovation suggested by Rogers during the review of literature. The antecedents could be divided into two types due to their nature. The first type is business-related drivers such as support of top management and the second type is environment-related drivers such as competition intensity, In this case, CRM adoption model in this thesis can be built by extending Rogers' attributes of innovation and adding factors related to business and the environment as previous researchers have done.

The detail discussion of antecedents grouped under business-related drivers and environment-related drivers are presented in 3.2.2 and 3.2.3 respectively. In the literature, the most relevant business related antecedents include attitude towards change by top management, market orientation of the firm, innovation orientation, organizational group culture, organizational characteristics. The most relevant environment related antecedents include perceived accessibility of information technology solutions, competition intensity and desire of customer intimacy. In particular, information utilisation was considered to be a mediator between CRM adoption and the performance. The details will be provided in section 3.2.4.

3.2.2 Business related antecedents

i. Attitude towards change by top management

Top management attitude towards change significantly influences adoption decisions (Damanpour, 1991; Dewar and Dutton, 1986). In the implementation of organisational innovation, managers are usually presumed to influence the extent to which the innovation is adopted. Top management plays a central role in shaping organisational strategies (Kohli and Jaworski, 1990), the role of top management in the business context is likely to be significant. Hage and Robert (1973) implied in their research that individual attitudes are very important in predicting innovation. When they examined several health and welfare organisations, they noted that the attitude towards change held by the supervisors of small groups influenced innovative behaviour within an organisation. In 1980, Aiken *et al.* found that a manager's attitude towards change was positively related to innovativeness, i.e. a person who is receptive to change is more likely to try something new and vice versa. It is critical for senior managers to maintain a positive attitude towards change to integrate the resources of the whole organisation to respond to changes in the market. Managerial attitude towards change is expected to positively affect a firm's willingness to innovate. This is because managers' favourable attitude towards change facilitates an internal climate that encourages innovation (Kohli and Jaworski, 1990). In particular, an exploratory study conducted by Osarenkhoe and Bennani (2007) concluded that top management support is important for successful CRM implementation. As a result, managers' willingness to change and their acceptance of the need for change should facilitate a firm's CRM adoption decision.

ii. Market orientation of the firm

Market orientation is defined as the "the organizational-wide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments and organization-wide responsiveness to it" (Kohli and Jaworski, 1990). In addition, market orientation emphasises the philosophy of "customer pull" and places the highest priority on the profitable creation and maintenance of superior customer value. It is considered to be an organisational response to consumer needs and tastes. (Day, 2000; Narver and Slater, 1990).

In 1990, Narver and Slater proposed that market orientation consists of three behavioural components: customer orientation, competitor orientation, and interfunctional coordination; and two decision criteria: long-term focus and profitability. Customer orientation and competitor orientation include all of the activities involved in acquiring information about the buyers and competitors in the target market and disseminating it throughout the business(es). The interfunctional coordination is based on the customer and competitor information and comprises the business's coordinated efforts, typically involving more than the marketing department, to create superior value for buyers. In sum, the components of a market orientation encompass the activities of market information acquisition and dissemination and the coordinated creation of customer value. The inferences about the behavioural content of market orientation are consistent with the findings of Kohli and Jaworski (1990). Moreover, Lado *et al*. (1998) have provided a broader definition of market orientation. They define market orientation as "a competitive strategy that involves all

functional areas and levels of the organization and embraces the different market participants."

Javalgi *et al.* (2006) proposed that market orientation influences the practice of CRM. They suggested that market orientation affects the organisation's strategic outcomes representing the components of CRM. They argued that CRM is a strategy concept which incorporates the strategic outcomes of satisfaction, loyalty, customer retention and profitability while replying on technology. The interrelationships among satisfaction, loyalty, retention and profitability are the consequences of a market orientation.

On the other hand, the effect of market orientation on innovation has not been investigated effectively, as noted by Jaworski and Kohli (1993, p.129) who say "there is little in the literature on the effects of a market orientation on the metrics related to innovation." However, the situation improved later. In 1996, Atuahene-Gima suggested that innovation success depends on the organisation's market orientation in services like insurance and banking industry. In 2003, Mavondo and Farrell found a positive relationship between market orientation and product innovation with a significant path coefficient of 0.39. Thus market orientation may be an important determinant of innovation in the services sector.

This provides a good start to the exploration for this thesis. Accordingly, because of the innovative characteristics of CRM, market orientation is believed to be a factor for organisations to adopt CRM. The evidence from existing research suggests that , the higher the market orientation of an

organisation, the higher the chance of that organisation to adopt CRM.

iii. Innovation orientation

Manu (1992) considers innovation orientation as encompassing "...the total innovation programs of companies and is strategic in nature because it provides direction in dealing with markets". Hurley and Hult (1998) defined innovation orientation as "the notion of openness to new ideas as an aspect of firm's culture." They considered innovation orientation as the ability of the organisation to introduce new ideas or concepts. In 2004, Hult *et al*. viewed innovation as "the capacity to introduce processes, products or ideas in the organisation". In 2002, Homburg *et al*. viewed innovation orientation as a function of "the number of innovations a company offers, how many customers the innovation are offered to, and how strongly these innovations are emphasized." Finally, Siguaw *et al*. (2006) offer a broader definition of 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, behaviours, competencies, and processes of the firm to promote innovative thinking and facilitate successful development, evolution and execution of innovations". Innovation orientation is different from and more than attitude towards change as it is not simply the mind-sets about the change. In fact, it is the initiative for a firm to introduce innovate thinking. In addition, attitude toward change of top management represents the extent to which senior managers are in favour of change (Damanpour, 1991), but innovation orientation refers to holistic view from an organisation's perspective. Thus,

innovation orientation is considered as a strategic plan that provides the impetus for organisations to adopt innovation faster.

It was found that innovation orientation is likely to lead a truly innovative breakthrough for an organisation due to its emphasis on creativity (Berthon *et al*, 1999; Hurley and Hult, 1998). Furthermore, Barba-Sanchez *et al*. (2007) suggest that innovation orientation is the key element in the adoption of ICTs among SMEs. Consequently, innovation orientation is believed to be a strong motive for organisations to adopt an innovation process such as CRM.

iv. Organisation group culture

Organisation group culture stresses the value of employee unity, cooperation and a sense of belonging to the firm, encourages employees' understanding of both the firm and market, and supports participation in decision making (Quinn, 1988). As such, a group culture creates cohesion among employees and helps them understand why things happen the way they do rather than simply know 'what happens around here'.

Employees in a firm with a group culture sharing the same identity and knowing why changes and new actions are necessary are more willing to work together and engage in interfunctional activities. This may be an important factor in enabling organisations to adopt CRM, as CRM adoption requires organisation-wide coordination and genuine adoption will be an easier process when there is a cohesive and supportive group culture.

In 2001, Maselli pointed out that getting staff together, management support and cooperation are very important for deciding to adopt CRM, by showing the responses of 50 companies in a quantitative survey. The results of his study show that "Business areas have come together with a common focus" was extremely important in affecting the CRM initiative. Besides, "Clear goals" was the important issue affecting CRM initiative of an organisation. CRM shortfalls could be attributed to flawed execution and lack of executive communication. Users both within and outside the enterprise often receive inadequate training and are only minimally involved with projects until they are rolled out.

In 2002, O'Malley and Mitussis suggested that an organisation-wide adoption culture was the key to CRM adoption and implementation of CRM. The implementation of CRM systems might fail because of political infighting over the ownership of systems and data. This type of in-fighting has been documented within the information systems literature (e.g. Markus, 1983; Willcocks *et al*. 1997). In addition, there might also be competition over access to the system. Therefore, this is actually negatively affecting the adoption of CRM by organisations. In order for the firms to implement CRM successfully, organisation group culture is an essential factor for a firm when deciding to adopt CRM.

Besides, in the studies for new product development, the organisational group culture that supports innovation was found to be positively related to the success of the new product development programme (Gupta and Wilemon, 1990; Johne and Snelson, 1988). As a result, organisation group

culture is seen to be to be potentially an important driver for CRM adoption especially the strong culture that supports customer relationship and innovation.

v. Organisational characteristics

Some characteristics of organisations have been found to influence the innovation adoption decision (Zaltman *et al.* 1973). The variable most often found to be positively related to the adoption of innovation is the size of an organisation. Due to the size of an organisation a certain critical mass may be present, which justifies the adoption of particular innovations. Also, for larger organisations there may be a greater necessity to adopt some innovations than for smaller ones (Kimberley, 1981). In 1983, Kennedy also pointed out that one variable most often found to be positively related to the adoption rate of innovations in the industrial context, is the size of the adopter. Although the significant influence of size on adoption may be attributable to its interdependence with other variables (Rogers, 1962), there are good reasons to expect large firms to adopt innovation before small firms, in particular if there are economies of scale in the use of the innovation (Kimberley and Evanisko, 1981; Brown, 1981). Hence, organisational size may be an important factor for organisations in deciding to adopt CRM (innovation). Some researchers may argue that size of organisations has a moderating effect on adoption, therefore, this argument will be explored further during exploratory interviews.

Besides size of organisation, Mansfield (1968), based on limited testing in the industries, found support for four other variables which he proposed as

influencing the probability of adoption of a technological innovation by the individual firm.

i.   The number of firms adopting the innovation

ii.   The expected effectiveness of the innovation

iii   The size of investment/the cost required

iv.   The nature of industry

He found a positive relationship between each of these variables and the adoption of the innovation, with the exception of size of investment, which correlated negatively.

3.2.3 Environment related antecedents

i. Perceived accessibility of Information Technology (IT) solutions

Information technology is regarded as the key enabler of CRM. There have also been active discussions on the implementation of relationship management package (Jutla *et. al.*, 2001), customer information system (Mentzas, 1997; Wells *et al.*, 1999), customer database (El Sawy and Bowles, 1997), decision support application (Kohli *et al.*, 2001). Availability of suitable IT solutions makes the adoption of CRM easier and more sophisticated.

According to the definition of CRM, IT is highly important and essential to the development from RM to CRM. As discussed, the concept of CRM originated from relationship marketing in which it was found that there is a major change in the way companies organise themselves as firms switch from product-based to customer-based structures. A key driver of this change is the advent of CRM which, underpinned by information systems convergence

and the development of supporting software, promises to significantly improve the implementation of RM principles. Many studies have shown that the development of information technology makes companies apply CRM in their operations in order to gain profits.

From the practitioners' point of view, some may even think that information technology is the heart of CRM. For example, Cyr (2000) has quoted a saying by Don Gordon, vice president of advertising and computer cataloger, CDW: "We define customer relationship management as using the technology we have developed internally to provide information to customers that we believe is something that responds specially to their information needs." He also pointed out that technology is important for organisations move from relationship marketing to CRM. The technology means developing or buying software that can track customers and capture purchase dates, whether it is done by *phone, fax, snail mail or e-mail*. It also means creating a *data warehouse* to store the information, as well as building integrated systems that flow those data back to every other operation in the companies. Thus, marketing, sales, customer service, and fulfilment all know what the customer is doing, when, where and how, and in real time.

For example, the *Internet* is one of the biggest assets for companies to move to CRM. For one thing e-commerce data allow companies to track not only what customers buy, but also what they are interested in buying or what they are not buying. That information alone can enable companies to enhance their data warehouses with detailed information about how and

why customers shop with them, processes to enhance the productivity and responsiveness of their work force, as well as to deliver new levels of service, which has also played a major role in enabling CRM initiatives and providing a higher quality of customer service (Galbreath, 1998).

Enabled by advanced information technologies available in the environment, companies can now collect unprecedented amounts and depths of data on their customers and turn those data into information for their strategic business purposes. From an information management perspective, customer identification is a critical beginning of CRM, since when customers do not reveal their identity to the firm, they are invisible to the firm, and are thus unmanageable. As a result, technology plays a very important role in identifying the customers. Park and Kim (2003) define a customer as "...customer whose identification and contact information exists within the firm". Once able to identify its customers, a firm can make its customer-base more loyal by collecting, processing and applying customer profiles and transaction data to create in-depth understanding of customer needs and provide fair value to all customers.

However, Woodcock and Starkey (2001) emphasise that there will be barriers in implementing a successful CRM project if organisations mistake CRM technology for a marketing strategy.

ii. Competition intensity

The second external environment factor posited to lead CRM adoption is the competition intensity in the industry. Intensity of competition is termed

commonly as the perceived degree of hostility in the environment evolving from competition (Pelham and Wilson, 1996). In the work on innovation, Nickell (1996) and Blundell, Griffith and Reenen (1999) proposed a positive relationship between market competition and innovative output empirically. Organisations facing higher market competition have a higher chance of adopting technological innovations.

Moreover, Boones (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. When Yang and Liu (2006) investigated the antecedents of the adoption of innovation diffusion in high technology firms in China, they proposed a positive relationship between competitive intensity and a firm's adoption of innovation diffusion. Although the result is not significant in their conclusions, it does, however, serve as a valuable reference for competitive intensity to be included in this thesis as a driver of adoption of CRM. Again, CRM adoption is considered as an innovation adoption from an organisation's perspective in this study. As a result, competitive intensity may have a positive influence on the level of CRM adoption in the Hong Kong environment. In this case, it is reasonable to extend the model of innovation diffusion with competitive intensity as a factor in affecting the CRM adoption.

iii. Desire for customer intimacy

The relationship between customer intimacy and CRM adoption was emphasized in some literature. The desire for customer intimacy focuses on the extent to which companies wish to keep a close relationship with

customers, It is distinct from the construct of relative advantage discussed earlier, because relative advantage is an attribute of the innovation whereas 'desire for customer intimacy' is a dimension of the organisations strategy. Customer intimacy here means knowing a customer's habits and wants and anticipating their needs. It implies superior management of the customer experience, closeness with customers and a commitment to deliver a higher level of service to every customer. Thus, desire of customer intimacy refers to firms knowing customers as well as customers seeking intimacy with firms.

Nowadays, customers are more knowledgeable and companies must respond by shifting the way they think about customers. In the past, companies treated all customers the same but, as market research has shown, not all customers are the same. As a matter of fact, as customers become more sophisticated, their needs become more diverse. Satisfying their needs and keeping every customer happy becomes a challenge. Moreover as organisations are able to gain greater insights into customer lifetime value (CLV), it becomes clear that some customers are more profitable than others and accordingly it makes sense to treat those customers differently. Customer lifetime value is one of the metrics that help companies assess the return on marketing investment. The easily availability of transaction data nowadays has made CLV an increasingly important concept in practice. Reinartz and Kumar (2000) have done a lot of work on lifetime value and customer profitability. They suggested that company's differential communications strategy towards different groups of customers is important for making profits. For example, they pointed out

that both short-life/high-revenue customers and short-life/low-revenue customers might be converted to a more attractive segment by enrolling every customer in a frequent shoppers program that gives reward points on the basis of frequency as well as the dollar value of purchases.

Throughout the discussions in the previous chapters, CRM has been viewed as a new approach, a new technique and a new management concept for managing customers. It focuses on creating a technological environment that integrates marketing, sales, service, back office and supply-chain functions in order to allow an enterprise to take a 360-degree view of its customers, and to provide customisation, personalisation attention, and focused after-sales support to customers. In 2001, Parvatiyar and Sheth suggested that the core theme of all CRM and relationship marketing perspectives focuses on a cooperative and collaborative relationship between the firm and its customers, and/or marketing actors. CRM is a way to differentiate the company in the customers' eyes. CRM focuses on creating higher degrees of existing intimacy with the customers rather than marketing the same way to everyone. CRM helps organisations determine the high-value customers and develop a marketing strategy that is relevant to each customer (Jackson, 2002).

For example, Perea (2002) points out that intimacy is especially useful in strong personal selling services such as those in the insurance and financial investment sectors. Customers who seem to be more intimate with the companies and their personal sellers seem to develop a bond that allows them to easily differentiate other companies. Apart from that, it is believed

that intimacy can also create a long-term relationship with a company.   This relationship can achieve many positive results, including an increase in customer retention figures and an increase in customer satisfaction. In these financial and insurance investment services companies, the desire to sustain a high degree of intimacy further endorses and justifies the CRM adoption efforts of a company. Many insurance companies in Hong Kong have developed a mobile application (Personal Digital Assistant (PDA)) for their insurance agents to keep a mobile copy of each client's information so as to keep a high degree of intimacy between clients to further understand their needs and their behaviour patterns.

CRM seems to be an enabler for companies to develop programmes and strategies that encourage customers to enhance and personalise their relationship with their supplier. As a result, firms may be expected to consider adopting CRM in order to create and enhance intimacy with customers perhaps as a basis for building competitive advantage. The desire of intimacy is expected to vary across firms, thus when the intimacy desired by customers is higher, it is believed that the level of CRM adoption should be higher.

3.2.4 Enabler of CRM – Information utilisation

Since information technology is agreed as an enabler of CRM, after adopting CRM, companies should, therefore, be able to collect unprecedented amounts and depths of data on their customers and *turn them into information* for their strategic business purposes. This information can then be utilised by firms to identify their customers. That means an organisation

can make its customer-base more loyal by collecting, processing and applying customer profiles and transaction data to create an in-depth understanding of customer needs and provide fair value to all customers. Hence, the information utilisation may have positive effect on the organisational performance such as customer satisfaction and returns.

In 2003, when Park and Kim discussed the framework of dynamic CRM, they proposed that organisations can manage their customer information to maintain a long-term relationship with their customers with the help of information technology during the execution of CRM, hence boosting the performance of the organisations. They suggested a way to identify the customers and they defined identified customers as "a customer whose identification and contact information exists within a firm" (Park and Kim, 2003). Some of the identified customers will become core customers when the firms care for their relationships with them. Core customers are a group of customers who are really loyal to the firm and generate huge value for the firm. A core customer of a firm is defined as "an identified customer who accrues substantial value to the firm through high profit contribution, long term active relationship, or strong opinion leadership." (Park and Kim, 2003)

For example, with the help of the Customer Information System (CIS) for CRM, CRM can be implemented as a relationship-oriented marketing strategy. A CIS for CRM consists of a customer database, a communication channel, and an application for RM. Besides, technology such as the internet can offer companies unprecedented opportunities for getting to know customers in depth and for customising offerings to meet their preferences

on a one-to-one, personalised basis.

Furthermore, implementing CRM initiatives have been popularised by recent development in technology, particularly in data storage capabilities, data warehousing applications, segmentation technology and *data mining techniques* (Berry and Linoff, 1997). Data mining uses sophisticated statistical processing or artificial intelligence algorithms to discover useful trends and patterns from the extracted data. Data mining can yield important insights including prediction models and associations that can help companies understand their customers better. The SAS Institute defines data mining as the *information process* of selecting, exploring and modelling large amounts of data to uncover previously unknown patterns of data (SAS Institute, 1998). Data mining tools include the following to help the companies:

a. description and visualisation;

b. association and clustering; and

c. classification and estimation (prediction)

According to the literature, more companies are using data mining as the foundation for strategies that help them outsmart competitors, identify new customers and lower costs. (Davis, 1999). In particular, data mining is widely used in marketing, risk management and fraud control (Kuykendall, 1999). For example, the Farmers Insurance Group data mines customer information to develop competitive rates; Foote Cone & Belding analyse data mined from operational and transactional systems to refine clients' direct mailing including Fingerhut, American Century Investments, Charles

Schwab & Company, Chase Manhattan Bank, Bank of America, US West, Bell Atlantic, Alltel, Wal-Mart and Boots PLC (Lach, 1999; Schober, 1999; Stedman, 1998; Brabazon, 1997).

These information processing techniques make CRM more successful as it can enable firms in (1) using database information and supplier pipeline processes to forecast demand more accurately and create viable scheduling applications, (2) reducing overall production costs by streamlining the flow of goods through production processes and by improving information flow, and (3) improving lead time, increasing quality, and enabling more customisation at a lower cost.

As previously discussed, the turning of data into useful information (information utilization), the Customer Information System (CIS) for CRM and the recent technologically driven data-mining techniques all provide potential benefits to the organizational performance and thus are effectively said to provide customer satisfaction in the long run. Overall, utilising information enables organisations to quickly and efficiently disseminate and share information across organisational boundaries, thereby empowering employees to make decisions that are consistent with the organisation's goals and objects, and enhance the benefits to both the organisation and customer. As a result, the influence of information utilisation on the relationship between CRM adoption and organisational performance is suggested.

Information utilisation is considered to be different from the other antecedents that have been discussed. Utilisation of information such as CIS

and some advanced data mining techniques are believed to provide benefits to organisational performance after CRM has been adopted. Someone may argue that there is some similarity between market orientation and information utilisation as achieving market orientation requires a firm to engage in information processing activities that are directed towards understanding their customers and their competitors in developing a timely, co-ordinated and cross functional response market learnings. In fact, such information processing are only activities that support the behavioural components: customer orientation, competitor orientation and interfunctional coordination in market orientation. Hence, the author thinks that the concept of information utilisation within CRM adoption is totally different from market orientation.
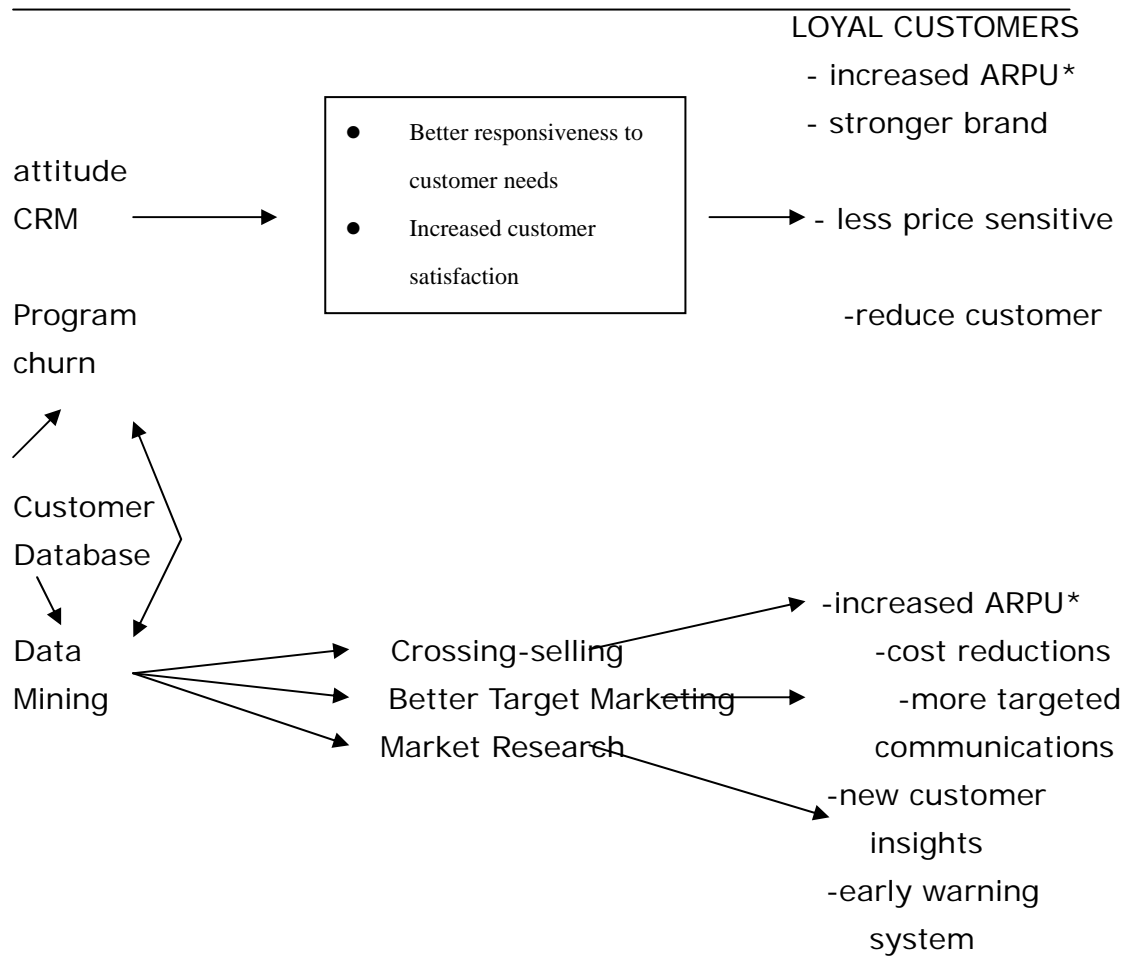
Thus far, the review of existing literature suggests that the CRM adoption decision might usefully be conceptualized around three broad categories of antecedent, namely the perceived attributes of innovations (following the Rogers framework), internal organizational influences and external environmental influences. Having reviewed the potential antecedents of CRM adoption, the next section is going to explore the impacts of CRM adoption.

3.3 Impacts of CRM adoption

As mentioned in chapter 2, research on CRM is mainly about the implementation issues of CRM adoption, concept and definitions of CRM and the information technology for supporting the CRM application. Some research has demonstrated that CRM activities can enhance firm performance. However, it appears that no related research has been done before in Hong Kong. This is the reason for exploring such a relationship in this research besides investigating the drivers of CRM adoption. Therefore, this section tries to provide an overview of how CRM was found to impact on organisational performance, and also briefly explain how innovation and other marketing practices impact on performance. Hence, some of the measures discussed could be added to the model to be designed after undertaking the exploratory interviews. Details of the exploratory interviews will be provided in the next chapter.

In 2002, Dowling proposed how the CRM works in an organisation. The idea is shown in Figure 3.2. He proposed that CRM program leads to better responsiveness to customer needs which can also lead to a more satisfied customer. Also, he emphasised that the relationship built from satisfying customers is the key to the success of a CRM program. And this will make the customer more loyal to the company in ways such as increased ARPU (Average Revenue Per User), stronger brand attitude, less price sensitivity and reduced customer churn. Hence, there is a strong link between CRM, customer satisfaction and loyalty.

Figure 3.2- How CRM works

LOYAL CUSTOMERS
- increased ARPU*
- stronger brand

attitude
CRM

- Better responsiveness to customer needs
- Increased customer satisfaction

- less price sensitive

Program
churn

-reduce customer

Customer
Database

Data
Mining

Crossing-selling
Better Target Marketing
Market Research

-increased ARPU*
-cost reductions
-more targeted
communications
-new customer
insights
-early warning
system

*ARPU- Average revenue per user
Source: Dowling, G.. (2002)

Srinivasan and Moorman (2005) showed that firms that invest more in the CRM activities and technology have greater customer satisfaction by using a multifirm (cross-sectional) database. With the same method, Mithas *et al.* (2005) found that the use of CRM applications is related to increased customer knowledge, hence greater customer satisfaction. Jayachandrana *et al.* (2005) discovered that retention and customer satisfaction is greater for firms that have good relational information processes in place.

There are also other studies that have focused more generally on links between RM and satisfaction or loyalty. As CRM is philosophically the same

as RM, it could give some ideas about the possible impacts of CRM. For example, in a study of bank customers in Malaysia in 2007, Ndubisi concluded that RM has influence on the customer loyalty due to its underlying concepts of trust, commitment, communication and conflict handling in RM. The results implied that if banks wish to retain the develop loyal customers, then they should be trustworthy and committed to the service ethic; should communicate timely and accurately and must resolve conflicts in a manner that eliminate unnecessary loss and inconvenience to customers. Ricard and Perrien (1999) discovered that RM has a significant impact on customer satisfaction when they analyse how RM affects the bank's performance. A mail survey was conducted with managers who are responsible for bank relations. In 2006, Leverin and Liljander conducted a survey in a bank in Finland. The results indicate that the levels of perceived customer relationship satisfaction and loyalty are relatively high and the customers have perceived improvements in the banking relationship since the RM strategy was launched. Overall, customer satisfaction and loyalty could possibly be the consequence of CRM adoption.

On the other hand, it was acknowledged that there is a debate among academics that the relationship between satisfaction and retention is weak and it is argued that satisfaction does not necessarily lead to retention. Lowenstein (1995) proposed that even if customers are satisfied, they may decide to switch service providers. Hence, a satisfied customer may not intend to return to a company. This is the reason why satisfaction does not necessarily lead to retention. Furthermore, customers stay with a provider only because there is lack of alternatives (Eriksson and Lofmarck Vaghult, 2000). Also, Reichheld and Aspinall (1993) argued that satisfaction does not

necessarily lead to repurchase or retention. Furthermore, in 1996, Hallowell argued that customer satisfaction cannot produce lifetime customers alone although satisfaction can result in retention. Knowing that the relationship between customer satisfaction and retention is weak, Gerpott *et al.* (2001) have suggested that customer retention and customer satisfaction should be treated as distinct but casually inter-linked constructs.

In addition, Reinartz and Kumar (2002) have found that the relationship between loyalty and profitability is weak when they studied the dynamics of customer loyalty using the customer databases of four companies. They discovered that customers who always purchase from a company are not necessarily cheaper to serve, less price sensitive or effective at bringing in new business. They found that the correlation between customer loyalty and companies' profit is lower than 0.45. Hence, the association seems quite weak. At the same time, they argued that loyal and experienced customers could actually be more expensive to serve, i.e. the investment to please regular customers is very high. On the other hand, Reinartz and Kumar (2000) recognise that there are long-life and short-life customers and both types can be highly profitable. In order to achieve this profitability, organisations have to identify the type of relationship with each of its customers and customise its marketing strategy appropriately.

Although there is a debate on the correlation between customer satisfaction, loyalty and profitability, previous research on CRM adoption and RM application provides evidence that the relationship keeping strategy could enhance the customer satisfaction and loyalty based on my earlier

discussion. Hence, I will still consider customer satisfaction and loyalty to be the consequences of CRM adoption in my research for further investigation in Hong Kong context.

Besides customer satisfaction and loyalty, CRM (especially with a database-driven system) has claimed significant improvements in identifying profitable and unprofitable customers and increasing the efficiency and effectiveness of target marketing. Therefore, CRM helps organisations get a better picture of customers, who they are, what products and services they have and how profitable they are. Once they have that picture, it helps them create better sales and service models to attract and retain those customers. That is why CRM has been proven to generate more *return on investment (ROI)* than all other efforts. It is believed that CRM allows a company to have better picture about their customers. Once data such as age, income, presence of children, value of home, etc. are appended to the customer records, modelling can be used to determine different customer segments. Each group of customers has different lifestyles and purchasing preferences. Good CRM will develop different messages aimed at each group, with products and offers appropriate to the group being addressed. Because CRM was carefully targeted, creating different messages, different advertisements and different media can be expensive.

In 2002, McKim and Hughes used ROI and customer lifetime value to measure the benefits of CRM over traditional mass marketing. It was found that when companies spent equal amounts on both mass marketing and CRM, the results showed that the return on investment (ROI) for CRM is very surprising because the CRM acquisition yields customers worth twice as

much as those acquired through mass marketing. Therefore, the phenomenon of an increase in ROI can reflect the success of CRM adoption.

Ryals (2005) showed that one of the business units she studied was able to achieve a 270% increase in business unit profits in a case study. Consequently, there is a high chance that the adoption of CRM brings profits.

Based on the argument provided in section 3.2, CRM is not only a marketing strategy, but also an innovation due to its technology dimension. Therefore, this section tries to briefly explain how innovation and other marketing practices impact on performance so that it can provide more framework about the possible impact of CRM adoption.

Past research studies on innovation and marketing practices have employed several measures of organisational performance. Organisational performance has been measured using a variety of measures. It may be measured using measures of efficiency or effectiveness. Measures of efficiency have a cost-benefit focus – they usually comprise a ratio of some inputs and outputs. Financial ratios such as return on assets, return on equity etc. are measures of efficiency (Ramaswamy, 1993). Measures of effectiveness have a revenue generation focus – and are measured by variables such as market share, sales etc. In fact, no single measure of performance may fully account for all aspects of organisational performance (Snow and Hrebiniak, 1980). Some studies have employed measures such as return on asset or profitability. However, as noted by Hambrick (1983), prospectors who are the most innovative firms in the Miles and Snow

typology, might not have high financial performance, but are often high performers in the area of market share. Further, past research has shown that there are distinct categories of innovations which may have fundamentally different characteristics e.g. technical and administrative innovations. These innovations could affect different aspects of organisational performance. As organisations become larger, they may emphasise administrative innovations more than technical innovations because administrative innovations enhance coordination (Daft, 1981). This, in turn, may reduce costs and promote efficiency. Thus, administrative innovations may have different performance implications from those of technical innovations.

In 2003, when Wu *et al*. studied the adoption of e-business, they proposed that the intensity of e-business adoption in different areas is positively associated with 1) increased efficiency, 2) improved sales performance, 3) greater customer satisfaction and 4) enhanced relationship development.

Kohli and Jaworski (1990) have proposed the link to business performance in their study of market orientation. Their suggestions were based on the insights obtained from field interviews and the literature pertaining to the consequences of a market orientation. The consequences were about three areas: 1) customer response, 2) business performance and 3) employee response. It was noted from their study that market orientation enhances the performance of an organisation. The favourable business performance indicators include return on investment, profits, sales volume, market share and sales growth. Support for some of these consequences was reported by

Narver and Slater (1990).

The second set of consequences proposed by Kohli and Jaworski (1990) relate to the effects of market orientation on employees. Market orientation provides psychological and social benefits to employees, which leads to a sense of pride in belonging to an organisation in which all departments and individuals work towards the common goal of serving customers. As a result, it has an impact on job satisfaction and organisational commitment of employees.

The third set of consequences of a market orientation identified by Kohli and Jaworski (1990) involves customer attitudes and behaviour. Market orientation leads to satisfied customers who spread the good word to other potential customers and keep coming back to the organisation. As a result, they proposed the greater the market orientation, the greater the customer satisfaction and repeat business from customers.

To reiterate, CRM is an integrated strategy and technology for companies to manage relationships with potential and current customers as well as business partners. Overall, the three areas of consequences suggested by Kohli and Jaworski (1990) act as the most relevant reference for structuring the possible impacts of CRM adoption in this thesis. So far, customer satisfaction, customer retention, return on investment and employee satisfaction are believed to be the key outcomes of CRM adoption based on the discussions. Hence, they could be categorized into the three sets suggested by Kohli and Jaworski (1990).

3.4 Conclusion

In answering the question "why do organizations adopt CRM in different degrees?", existing theoretical frameworks were used to help in understanding the antecedents of CRM adoption in this research due to the generalisability. Models about ICT, TRA, TPB and TAM were reviewed as CRM was perceived as an innovation. Despite a number of studies aimed at understanding factors that may influence the adoption of ICT and innovation adoption, there has been little work in examining CRM adoption. Rogers' (1962) theory of diffusion of innovations is finally used as a base for the model development in this study as it is the most widely accepted academic work on innovation adoption which can be generally applied to a variety of innovations. It has been adapted and evolved to serve technological innovation study throughout many decades, and across both consumer and business areas.

In addition to using Rogers' innovation diffusion model, other factors were gathered through reviewing the literature which was thought appropriate in extending the model and understanding what influence the level of CRM adoption and its consequences. The most relevant factors were divided into attributes of innovation (by viewing CRM as innovation), environment related antecedents and business related antecedents. The proposed environment related factors include perceived accessibility of IT solutions, competition intensity and desire of customer intimacy. The business related factors include attitude towards change, market orientation, innovation orientation, organisational group culture and organisational characteristics.

Also, the potential mediating role of information utilisation was investigated. Technology has become a prime factor in the move to CRM. A confluence of multiple disciplines, from a data warehouse to data mining and other complementary technologies, have enabled marketers to shift through mountains of data to extract invaluable information and knowledge about their customer base. This has allowed employees in the company to develop marketing mixes that better meet individual needs. The internet and associated technologies form the centrepiece of a firm's CRM abilities. Without these technologies, the positive impacts of CRM would be difficult achieve.

Finally, the impacts of CRM adoption was investigated. Increase in customer satisfaction, customer loyalty, return on investment and employee satisfaction were believed to the performance of CRM adoption. By referencing the literature of Kohli and Jaworski (1990) in their study of market orientation, the impacts could be categorized under three sets: 1) customer response 2) business performance and 3) employee response.

Using the literature reviewed in chapter 2 and 3 as background, evidence further insights should also be gained by using qualitative interviews with practitioners so as to make sure the understanding of CRM adoption issues and terms is consistent between academic and practitioners. It is very important before developing the conceptual model for this thesis as no one has done such research in Hong Kong. Therefore, the underlying philosophy of exploratory interviews and the conceptual framework will be presented in the next chapter.