

The Adoption and Selection Process of CRM Software: A Review of the Literature

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Abstract: *Today, much more than in the past, the increasing trend toward integration of the economies and convergence of the markets in global level, but also the multidimensional competition, prompted the enterprises in the discovery of methods that will lead to an increase of customer loyalty and long run profitability. Customer Relationship Management (CRM hereafter) systems, help enterprises turn from the product-centered stage to the customer-centered stage. There is, however, a strong debate both in the academic and in the business community, concerning the success and failure of a CRM solution. The successful implementation is elusive to many enterprises, mostly because they do not understand the factors affecting the selection and adoption process of a CRM application. The present study is motivated by the desire to shed light on this area of study. The central aim of this paper is to review the literature on CRM in order to obtain a comprehensive understanding of issues and factors critically involved in the selection and adoption process of such an application. This is done, partly to help enterprises achieve a deep understanding of how to make better decisions on the adoption and selection of a CRM system and partly, to identify research gaps and propose directions for future researchers.*

Keywords: *Customer Relationship Management (CRM), Information Technology (IT) Adoption, CRM influential factors, Literature review*

1. INTRODUCTION

In today's highly competitive environment, traditional business strategies are thought to be out of date. Enterprises throughout the world, have come to realize that, in order to gain competitive advantage and remain stable in the market, now more than ever, need to identify profitable customers, understand their values, improve their satisfaction and build with them close relationships of high quality, (Aberdeen Group, 2010; Schubert et Williams, 2009b; Al Mamari et Nunes, 2008; Ko et al., 2008; Grabner et al., 2007). To meet these goals, enterprises have invested or are planning to invest huge amounts on software packages. CRM technology is considered as an essential tool, adopted to enable the creation and management of long-term relationships with customers. Indeed, CRM systems are gaining popularity worldwide because they enable enterprises get the knowledge of who their customers are, when and what they bought as well as what they plan to buy in the future, based on their past behavior and their current needs (Foss et al., 2008). It should be noted however that, despite the wide use of CRM projects in current business strategies, the failure rate of CRM projects is still particularly high as it has been argued by earlier works (Friedrich et al., 2010; Schubert and Williams, 2010; Finnegan and Currie, 2009; Gartner Group, 2009). A mistaken CRM application may have disastrous consequences for a company. Due to this problem, the number of new or updated versions of CRM solutions entering the market has grown in recent years, (Aberdeen Group, 2003). Therefore, adopting an appropriate CRM system is a big challenge for many organizations up to today and sometimes, it might simply be a waste of money if is installed before the company is really ready for it (Schubert and Williams, 2010; Band, 2008; Santoso, 2008; Bard et al., 2005).

Without a doubt, as substantial business investment in CRM systems is continuing, it is increasingly important to understand which solution is most appropriate for each company. The selection and adoption process of CRMs is a significant task and firms are constantly looking for the right solution, as it can have an important impact on their business performance. Therefore, managerial decisions should be made based on a deep understanding of the factors that influence when, why and how a CRM technology should be adopted (Al Mamari and Nunes, 2008; Arunthari, 2005, Freeman and Seddon, 2005). A number of significant drivers affecting a firm's decision to select and adopt a CRM application has been suggested in the literature and can be analyzed into two board categories, namely external and internal factors. The mentioned factors are common across different studies, indicating a high level of agreement among researchers, (Ou and Banerjee, 2009; Peltier et al., 2009; Ramdani et al. 2009; Sophonthummapharn, 2009; Al Mamari and Nunes, 2008; Caldeira et al., 2008; ; Ko et al., 2008; Paulissen et al, 2007; Richard et al., 2007).

This research aims at, firstly, providing and discussing an updated review of issues critically involved in the selection and adoption process of CRM applications based on some important pieces of previous research work within the

area, and secondly, identifying the factors which influence the extent and depth of CRMs adoption, in order to help both academics and practitioners gain greater insights and overcome potential difficulties of CRM decision projects.

The remainder of this paper is structured as follows: Section two begins with the basic concepts of CRM and highlights the pros and cons of its implementation. The following section moves on to present in details the findings of our literature review regarding the selection and adoption process of CRMs. A discussion of the findings, some concluding remarks and directions for future research and practice are outlined in the final section.

2. THEORETICAL BACKGROUND

In this section, our interest turns to understanding more fully the term CRM. Therefore, we make an effort to present the main definitions and descriptions of CRM technology as well as potential risks and benefits enterprises reap from its implementation.

2.1. What is CRM Really?

Nowadays, enterprises all around the world are turning their attention to the question of how to increase both their customer loyalty and long run profitability. In this context, CRM software turns to be an important strategic tool and has been viewed as an enabler of turning enterprises from the product-centered to the customer-centered stage (Aberdeen Group, 2010; Schubert and Williams, 2009b). Therefore, the great significance of CRM technology has drawn considerable attention among the academic community during the last years and the term CRM is used extensively in both practice and research.

But what is CRM really? The literature is full of definitions and relevant descriptions (Shanks et al. 2009; Brown, 2000) and consequently there is no consensus of the term CRM, as it means different things to different people. More specifically, some authors look at CRM as a business and management strategy designed for re-establishing enterprises' connections to new and existing customers and for optimizing their profitability and revenue (Coltman et al., 2010; Bradshaw et Brash, 2001; Gartner Group, 2000). On the other hand, many researchers introduce a more integrated view, describing CRM as a technology solution which integrates customer service, marketing and sales functions of the business with suppliers, internal customers and e-customers (Richard and Jones, 2008; Kim et al., 2003). We believe that CRM is not merely a technological application for marketing and other functional areas of a company but it should rather be defined broadly as a combination of marketing methodologies, software and Internet capabilities that aims to manage and re-build stable customer relationships, promote customer loyalty and satisfaction as well as improve cost and revenue sites of the profit equation, through better customer services and products development. (Sarmaniotis and Stefanou, 2005; Stefanou et al., 2003). CRM projects require business process reengineering and a continuous effort from all levels of employees in order to bring the expected benefits in the enterprise.

2.2. Understanding the benefits and risks of a CRM system

Many enterprises have great expectations from the implementation and use of a CRM system, as they seek to support their marketing, sales and services activities. But, like any other business initiative, CRM too has its own benefits and challenges. Therefore, before a firm decides to invest on a CRM, it is very important to identify the benefits expected from the project.

The most frequently mentioned benefits identified in our review are:

- Enhancement of customer loyalty and retention (Shanks et al., 2009; Richard and Jones, 2008; Staehr, 2007; Freeman and Seddon, 2005; Buttle, 2004; Harej et Horvat, 2004; Agrawal, 2003; Kim et al., 2003; Verhoef, 2003; Ko et al., 2000)
- Increased revenues and business profitability (Shanks et al., 2009; Avlonitis et Panagopoulos, 2005; Baumann et al., 2005; Freeman and Seddon, 2005; Buttle, 2004; Harej et Horvat, 2004; Sigala, 2004; Agrawal, 2003; Kim et al., 2003; Goodhue et al., 2002)
- Improved degree of customer satisfaction (Shanks et al., 2009; Richard et Jones, 2008; Buttle, 2004; Harej et Horvat, 2004; Sigala, 2004; Agrawal, 2003; Verhoef, 2003; Ang et Buttle, 2002; Goodhue et al., 2002; Kamakura et al., 2002)
- Reduced costs of direct marketing, customer acquisition and handling, etc (Buttle, 2004; Harej et Horvat, 2004; Croteau and Li, 2003; Ang and Buttle, 2002; Bergeron, 2002; Goodhue et al., 2002).
- Improved management decisions (Gartner Group, 2009; Eggert et al., 2006; Spekman and Carraway, 2006; Freeman and Seddon, 2005; Jones et al., 2005; Reinartz et al., 2004; Sigala, 2004; Park and Kim, 2003)
- Increased sales activities, number of consumers and Return on relationships (Shanks et al., 2009; Freeman and Seddon, 2005; Jones et al., 2005; Agrawal, 2003; Chen and Popovich, 2003; Goodhue et al., 2002)
- Increased customer lifetime value (Richard and Jones, 2008; Bolton et al., 2004; Rust et al., 2004)
- Automation of time consuming tasks and improvement of customer services (Gartner Group, 2009; Shanks et al., 2009; Eggert et al., 2006; Harej and Horvat, 2004; Sigala, 2004; Chen and Popovich, 2003; Kim et al., 2003)

- Improved ability to target customer needs and values (Gartner Group, 2009; Shanks et al., 2009; Harej and Horvat, 2004; Leigh and Tanner, 2004; Sigala, 2004; Jones et al., 2002; Ko et al., 2000)

Despite the above huge benefits of CRM systems, some applications may result in partial or total failure. The disappointing results from many CRM applications, illustrate the gap between a company's intentions and outcomes (Richard and Jones, 2008; Freeman et al., 2007; Bard et al., 2005; Bygstad, 2003). A sample of specific risks and problems a CRM system can bring to an enterprise includes the following, (Gartner Group, 2009; Bergeron, 2002; Gartner Group, 2000): vendors' failure, difficulties in implementing, customer and internal rejection, high costs and time overruns as well as inadequate technology infrastructure.

These risks and problems mean that CRM solutions were not carefully thought out and planned nor selected and implemented in details. However, knowing the reasons for success or failure of a CRM application as well as its potential benefits and problems, can help enterprises to organize better the adoption and selection process of such a project. Selecting and adopting the appropriate CRM, will help enterprises achieve several benefits and reduce potential risks.

3. LITERATURE REVIEW

3.1. Major CRM adoption and selection steps

As a company pursues CRM strategies, it becomes aware that the benefits and risks of such applications are of great significance for its going concern. But why is it so difficult for a CRM system to be successful? Like any other new initiative, CRM system suffers when it is poorly understood and incorrectly selected and adopted. To realize CRM success, both enterprises and IT executives should pay attention to the issues and factors critically involved in the selection and adoption process of such an application. Rogers (1995) sees adoption and selection process as the decision of any organization to make use of an innovation, such as CRM and defines it as "*the process through which an individual or other decision making unit passes from first knowledge of an innovation, to forming an attitude toward the innovation, to a decision to adopt or reject, to implementation of the new idea, and to confirmation of this decision*". A range of previous research works has been reviewed, in order to help enterprises understand better and improve their CRM adoption and selection process.

The adoption process of a CRM initiative concerns a sequence of steps a potential adopter should pass through before selecting and implementing the application. During the adoption phase, an enterprise becomes aware of the innovation, forms an attitude towards it and evaluates the new product or idea (Gopalakrishnan and Damanpour, 1994). Due to the fact that enterprises differ in the nature of the relationships they create and maintain (Bohling et al., 2006; Light, 2003), they must define carefully their business strategy and needs. During the adoption decision phase, planning activities are conducted to investigate if there is real need for business operations' re-engineering and to see if the best solution is adopting a CRM software package (Paulissen and al., 2007). Past research works have proved that a lot of companies dive headlong into a CRM project, without determining if their long term goals can be supported by their choice (Ou and Banerjee, 2009; Giga, 2001). As suggested by Light (2003), enterprises need to fully understand the theoretical and practical implications of a CRM project and also decide its role before implementing it.

To determine the great significance of a CRM system in relation to their strategic aims as well as to analyze the impact of its adoption from an organizational perspective, enterprises should compose an appropriate project team (Van Bennekom and Blaisdell, 2000). The project team must consist of both managers and end-users and its main responsibilities are to search for a CRM package that will meet the business' requirements (Caldeira et al., 2008; Chalmeta, 2006). According to Band (2008) and Bull (2003), all levels of management must cooperate with all levels of employees, to gain relevant expertise and support CRM initiatives.

The project team dedicates time in negotiating with many CRM vendors, as to get the most appropriate and competitive solution (Howcroft and Light, 2006). After the creation of a vendors' short list, meetings between the project teams and the end-users are necessary for the evaluation (in a technical and organizational level) of the available CRM packages. Moreover, a product presentation must be scheduled in order the company to gain more CRM expertise concerning the system's implications in relation to the business requirements. According to Ou and Banerjee (2009) and Howcroft and Light (2006) end-users should be engaged in the CRM project in order to ensure minimum resistance to change.

During the selection phase, a system needs to be chosen that will be able to meet the requirements formulated in the adoption phase, (Band, 2008; Paulissen et al., 2007; Bharati and Chaudhury, 2006; Heygate, 2001). Bull (2010) believes that by observing the CRM software working in another company will help a choosing firm to learn from adopters. Also, the author states that a company should have a contingency strategy in place to implement alternative solutions. Table 1 provides a summary of the steps involved in a CRM adoption and selection process, that has been identified in our review of prior literature.

Table 1: Major CRM Adoption and Selection steps.

Step 1	Define clear business strategy, needs and long term goals
Step 2	Compose an appropriate project team
Step 3	Conduct planning activities to see if CRM adoption is the best solution for the enterprise
Step 4	Negotiate and discuss analytically with many vendors on the nature of the business requirements and make a short list
Step 5	Schedule a CRM products presentation to gain more CRM expertise
Step 6	Evaluate (from both a technical and organizational perspective) the available CRM packages
Step 7	Select the solution that best meets business needs and requirements

3.2. Factors influencing the adoption and selection process of CRM systems

To date, a number of empirical studies have resulted in the identification of many factors that can influence the extent and depth of CRM system's adoption and selection, (Peltier et al., 2009; Ramdani et al., 2009; Sophonthummapharn, 2009; Al Mamari and Nunes, 2008; Ko et al., 2008; Bohling et al., 2006). As it has been noted earlier, CRM solutions are technology based and therefore, in this section we turn to technology adoption literature in order to understand the influential factors of CRM adoption and selection. Table 2 forecloses the main drivers of CRM adoption and selection that have been suggested in the literature, which can be analyzed into two board categories, namely External and Internal factors.

Table 2: Factors affecting CRM Adoption and Selection process.

FACTORS	MENTIONED BY
Internal Factors	
1. Clear business objectives	Sophonthummapharn, 2009; Al Mamari and Nunes, 2008; Band, 2008; Howcroft and Light, 2006; Giga, 2001;
2. Strong strategic planning	Al Mamari and Nunes, 2008; Jong et al., 2003
3. Top management involvement	Caldeira et al., 2008; Bharati, 2006; Gupta and Shukla, 2002
4. Strong organizational commitment	Al Mamari and Nunes, 2008; Hung et al., 2005; Radcliffe, 2001
5. Demographic profile of firms (age, size)	Ramdani et al., 2009; Bengtsson et al., 2007; Ang and Buttle, 2006; Bherati, 2006; Kuade and Serles, 2006; Nielsen et al., 2003
6. Organizational characteristics (culture, experience, innovativeness, risk aversion, attitude toward change)	Peltier et al., 2009; Sophonthummapharn, 2009; Caldeira et al., 2008; Ko et al., 2008; Avlonitis and Panagopoulos, 2005; Ali and Alshwawi, 2004; Chen and Popovich, 2003; Jong et al., 2003; Bhattacharjee, 2000; Parasuraman, 2000; Pennings and Smidts 2000; Agarwal and Prasad, 1998; Rogers, 1995
7. Existence of IS/IT competencies and learning capacity	Peltier et al., 2009; Sophonthummapharn, 2009; Caldeira et al., 2008; Chen and Popovich, 2003; Jong et al., 2003
8. Good Communication (Internal and External)	Al Mamari and Nunes, 2008; Goodman and Truss, 2004
External Factors	
1. Environment heterogeneity and uncertainty	McCole and Ramsey, 2009; Peltier et al., 2009; Chen et al., 2006; Chen and Popovich, 2003
2. Systems' providers expertise	Band, 2008; Chen et Popovich, 2003
3. CRM characteristics (complexity, compatibility, maturity, observability, relative advantage, switching costs)	Peltier et al., 2009; Ramdani et al., 2009; Sophonthummapharn, 2009; Band, 2008; Hung et al., 2005; Giga, 2001

The following list briefly describes each critical factor. It is worthwhile to note that many of them are interrelated. Thus, overlooking one factor can affect other factors and the adoption and selection process as a whole.

Internal factors

Clear business objectives

It is a very significant task for an enterprise to define clearly its objectives and long term goals and have them deeply understood by all levels of management and staff, (Sophonthummapharn, 2009; Al Mamari and Nunes, 2008; Band, 2008; Howcroft and Light, 2006; Giga, 2001).

Strong strategic planning

The strategic planning, in other words the ability of an enterprise to prepare and face a CRM implementation, is also a critical aspect in the adoption of CRM as widely recognised in the literature, (Al Mamari and Nunes, 2008; Kuade and

Sales, 2006; Jong et al., 2003). Al Mamari and Nunes (2008) and Ebner et al. (2002) state that a strong strategic planning enables the users of CRM applications to absorb them systematically and gradually.

Strong organizational commitment

A lot of previous research works have recognized the strong organizational commitment as a very important driver for CRM adoption and selection, (Al Mamari and Nunes, 2008; Hung et al., 2005; Radcliffe, 2001). Organizational commitment implies that business top management should be involved in the adoption process.

Top Management support

The top management involvement is required for the necessary structural and management changes in the business and managers should not only be positive to changes but they should proactively and continually support them as well, (Caldeira et al., 2008; Bharati, 2006). According to Gupta and Shukla (2002), CRM is a long term effort for an enterprise and that is why top management involvement and support is a key determinant of CRM adoption and selection by a company.

Demographic profile of firms

There are several factors concerned for the demographic profile of an enterprise, such as size, age, line of business and so on. Chen et al. (2006) point out that the larger an enterprise, the more willing to adopt an innovation technology, such as CRM. This happens according to Hung et al. (2005), because small firms suffer from lack of resources and technical expertise and they are more sensitive to risk. On the contrary, a large enterprise has more resources and infrastructure and therefore, greater tendency to adopt and support a CRM initiative. Thus, a firm's size is positively related to the extent and depth of CRMs adoption and selection, (Ramdani et al., 2009; Bengtsson et al., 2007; Ang and Buttle, 2006; Bherati, 2006; Kuade and Serles, 2006; Nielsen et al., 2003). Concerning the age of firms, often young firms are not ready to adopt and select a CRM system because are relatively small and lack of resources and technological expertise. However, young firms are more likely to find themselves in the modern or high tech sectors of an economy and be more willing to accept organizational changes that are required to strengthen their competitive position from the initial stages of their establishment. On the other hand, old firms tend to present a stronger resistance to change, (Ramdani et al., 2009).

Organizational characteristics

Organizational characteristics influence the CRM adoption and selection decision (Peltier et al., 2009; Sophonthummapharn, 2009; Caldeira et al., 2008; Ko et al., 2008; Avlonitis and Panagopoulos, 2005; Ali and Alshwawi, 2004; Jong et al., 2003; Parasuraman, 2000). These include innovativeness, attitude toward change and risk aversion.

In general, innovativeness can be defined as the degree to which employees are willing to use new concepts, ideas, products or services and their awareness of the potential of innovations. In the marketing literature, innovativeness has been identified as the acceptance degree on innovative technology of CRM and therefore, it has a positive impact on its adoption and selection (Chen et al.; Agarwal and Prasad, 1998; Rogers, 1995).

Attitude toward change can be viewed as the intention to accept a potential change brought from a CRM initiative, (Bhattacharjee, 2000). Enterprises that are open to changes, tend to be more likely in adopting a CRM technology, (Wu et al., 2003)

Like innovativeness, risk aversion concerns an organizational characteristic, which has a crucial impact on CRM adoption (Pennings and Smidts 2000). Risk aversion refers to the undesirable consequences people expect when they use technological innovations. Very often both managers and employees feel that they take risks and more responsibilities concerning the implementation of complex technologies in their organization activities.

Nielsen et al. (2003) identifies CRM experience as key determinant of CRM adoption.

Existence of IS/IT competencies and learning capacity

The existence of IS/IT competencies, the learning capacity of managers as well as their readiness to prompt, affect the adoption of CRM systems (Sophonthummapharn, 2009; Caldeira et al., 2008; Chen and Popovich, 2003; Jong et al., 2003). Similarly, as demonstrated by Peltier et al., (2009) firms that already have high levels of IT/IS sophistication, are more prepared to implement new technologies such as CRM. Srinivassan et al. (2002) suggest that organizations with strong technological competencies are more likely to adopt IT-related technology, such as CRM.

Communication

Communication can be divided into 2 categories: internal and external. Internal is the communication between all management levels and all levels of employees, so as everybody to be informed for the adoption, selection and implementation of a CRM system and the changes that are going to take place in the enterprise. The internal communication is very important as it can ensure minimum resistance to change, clarity of business goals and strong support and commitment (Al Mamari and Nunes, 2008; Goodman and Truss, 2004). External is the communication between an enterprise and its suppliers and customers, face to face, through email or advertisements, in order to be well informed of new business services, products and facilities.

External factors

Environment heterogeneity, uncertainty and hostility

A range of previous research studies concedes that factors such as environment heterogeneity, uncertainty and hostility have a strong impact on the adoption and selection process of CRM projects (Kara et al., 2005; Verhees and Meulenber 2004; Morris et al., 2002). As pointed out by Chen and Popovich (2003) and McGee and Sawyerr, (2003), enterprises operating in

complex, competitive, risky and turbulent environments, seek for advancing solutions to help them survive, gain greater operational efficiencies and serve customers better. Therefore, when the environment is characterized by heterogeneity and high uncertainty the need for a close customer relationship that a CRM system offers, influences positively its adoption.

Systems provider expertise

Advisors and software/hardware service providers are major factors for an enterprise not only to decide and select a CRM application but also to implement it successfully, (Band, 2008; Chen and Popovich, 2003). Support from top supervisors and from staff with high level of information knowledge are factors ranked by as crucial for the CRM adoption and selection process.

CRM characteristics

CRM characteristics have a strong impact on their adoption and selection process. These include complexity, compatibility, maturity, observability, relative advantage and switching costs, (Peltier et al., 2009; Ramdani et al., 2009; Sophonthummapharn, 2009; Band, 2008; Hung et al., 2005; Giga, 2001).

The more difficult a CRM system to be understood and used the slower the adoption process. As stated by Rogers (1995) the perceived innovation complexity, in other words the degree to which an innovation is perceived as relatively difficult to understand and use, has been widely recognized to have a negative impact on the CRM adoption and selection process. This happens mainly because a complex CRM initiative increases the sense of uncertainty concerning the use and the benefits expected by an organization. Similar to the complexity, the maturity of the system, has a negative effect on its adoption (Chen and Popovich, 2003). Furthermore, in order for a CRM adoption to be successful, compatibility is of great importance as well. Hung et al. (2005) define compatibility in the process of an innovation as consistent with procedures and value systems. As it has been argued by earlier research studies, CRM is both a business strategy and a technology tool (Richard and Jones, 2008; Kim et al., 2003) and therefore, an enterprise should have a positive attitude toward main culture changes so as the CRM application to be fully compatible with the business processes. Another key characteristic of CRM systems that influence the extent and depth of their adoption is their observability. Fakheradei (2007) defines observability as the degree to which the results of an innovation are visible to others. The benefits and risks of some innovations, for example CRM, sometimes are easily observed by other people and sometimes they are not easily understood. The greater the observability of an innovation the more rapidly its adoption and selection process. Moreover, the academic research community has identified the relative advantage as one of the strongest drivers of CRM adoption process. Fakheradei (2007) argues that the relative advantage is the degree to which the CRM technology creates customer information that leads to superior customer services while Hung et al. believe that it's an advantage, such as economical benefits and reputation, which a CRM can bring into an enterprise. The authors move on to say that "*the relative CRM advantage relates to perceptions of how adoption of CRM technology will ultimately benefit the organization when it comes to competing against other firms for customers*". The switching costs also are of a prevalent concern in the literature. They are related to the financial commitment required to purchase the CRM and complementary products as well as to the amount of learning or training needed to effectively use the innovation and other related issues (Peltier et al., 2002). The higher the switching costs, the lower the adoption of a CRM application (Speier and Venkatesh 2002).

4. CONCLUSIONS

The literature review reported in this paper indicates that CRM system implementations fail or not achieve in full their goals in the cases when enterprises either poorly understand the CRM concept or underestimate the importance of the issues involved in the adoption /selection phase of a CRM system's life cycle. A number of important factors organizations should pay attention when considering CRM solutions have been identified in the literature, such as top management support, clear business objectives, strong strategic planning and organizational commitment and so on. In addition, distinct steps and phases have been proposed for the adoption and selection process of CRM software. However, it seems that there is a lack of a holistic model or an integrated approach concerning the adoption and selection of CRM software; CRM software applications are often regarded as the front office system and viewed as a distinct information system within the organization, without considering the interaction with other enterprise applications such as Enterprise Resource Planning (ERP) and Supply Chain Management (SCM) systems. This view ignores the interdependence of the above transaction systems and the CRM system. CRM systems either use data originating in the ERP system or data from its own huge database. In either case, CRM should be examined in conjunction with all organizational information technologies and systems as well as with business strategy and vision. Future research could provide theoretical foundations and establish a solid framework towards the creation of an integrated model of CRM adoption.

REFERENCES

- Aberdeen Group, (2010), "Providing a 360° view of the customer: CRM and ERP complete the circle", Report. Aberdeen Group.
- Aberdeen Group. (2003), "Worldwide CRM spending: Forecast and analysis 2002–2006", available at: http://www.aberdeen.com/ab_company/hottopics/crmsspending2003/default.htm (accessed 15 March 2012).

- Agrawal, M.L. (2003), "Customer relationship management (CRM) & corporate renaissance", *Journal of Service Research*, Vol. 3 No.2, pp.149-71.
- Al-Mamari, S., and Nunes, M. (2008), "Readiness for CRM use in developing countries: case of Oman", in *Information Systems issues 2008 Proceedings of the IADIS International Conference - Information Systems*, in Algarve, Portugal, 2008, pp. 1-12.
- Ang, L. and Buttle, F.A. (2002), "ROI on CRM, a Customer-Journey Approach" *Proceedings of the Inaugural AsiaPacific IMP Conference*, Perth, Australia, 2002, available at: http://www.crm2day.com/crm_academic_papers (accessed 20 April 2012).
- Arunthari, S. (2005). "Information Technology adoption by companies in Thailand: a study of Enterprise Resource Planning System usage", Doctoral dissertation, University of Wollongong, 2005, available at: <http://ro.uow.edu.au/theses/338> (accessed 07 January 2012).
- Avlonitis, G.J., and Panagopoulos N.G., (2005), "Antecedents and consequences of CRM technology acceptance in the sales force", *Industrial Marketing Management*, Vol.34, No. 4, pp. 355 - 368.
- Band, W. (2008), "CRM Best Practices Adoption" Vol 13, No. 7, available at: <http://business.bt.com/assets/pdfs/CRM-best-practices-adoption-paper.pdf>. 2 (accessed 15 March 2012).
- Bard, W., Harrington, J., Kinikin, E., and Ragsdale, J. (2005), "Evaluation of top enterprise CRM software vendors across 177 criteria", MA: Forrester Research. Cambridge.
- Baumann, C., Burton, S., and Elliot, G. (2005), "Determinants of customer loyalty and share of wallet in retail banking", *Journal of Financial Services Marketing*, Vol. 9 No.3, pp. 231-248.
- Bergeron B. (2002), *Essentials on CRM, A guide to Customer Relationship Management*, Wiley and Sons Inc., NY, available at: http://books.google.gr/books?id=4tO3eTUufzC&printsec=frontcover&hl=el&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false (accessed 17 April 2012).
- Bharati P., and Chaudhury, C., (2006), "Studying the current status of technology adoption", *Communication of the ACM*, Vol. 49, No. 10, pp 88-93.
- Bohling, T., Bowman D., LaValle S., Mittal V., Narayandas D., Ramani G., and Varadarajan R. (2006), "Customer Relationship Management Implementation: Effectiveness Issues and Insights," *Journal of Service Research*, Vol. 9, No. 2, pp. 184-194.
- Bolton R.N., Lemon K.N., and Verhoef P.C., (2004), "The theoretical underpinnings of customer asset management: A framework and propositions for future research", *Journal of the Academy of Marketing science*, Vol. 32, No. 3, pp. 271-292.
- Bradshaw, D., and Brash, C. (2001), "Management customer relationships in the e-business world: how to personalise computer relationships for increased profitability", *International Journal of Retail & Distribution Management*, Vol. 29, No. 12, pp. 520-530.
- Brown, S.M. (2000), "Searching for effective CRM", *Enterprise Systems Journal*, Vol. 8, No.1, pp. 40-43.
- Bull C. (2003), "Strategic issues in customer relationship management (CRM) implementation", *Business Process Management Journal*, Vol.9, No. 5, pp. 592-602.
- Bull, C. (2010), "Customer Relationship Management (CRM) systems, intermediation and disintermediation: The case of INSG", *International Journal of Information Management*, Vol. 30, No. 1, pp. 94-97.
- Buttle, F. (2004), *Customer relationship management: concepts and tools*, Elsevier Butterworth Heinemann, Oxford.
- Bygstad, B. (2003), "The implementation Puzzle of CRM systems in Knowledge based Organizations", *Norwegian School of Information Technology*, Vol.16, No. 4, pp.1-13.
- Caldeira, M., Pedron, C., Dhillon, G., and Jungwoo, L. (2008), "Applying EA Perspective to CRM: Developing a Competency Framework", *Proceedings of the Third International Conference on Convergence and Hybrid Information Technology*, Washington, DC, USA, 2008, pp. 221-337.
- Chen I.J., and Popovich, K. (2003), "Understanding customer relationship management (CRM): People processes and technology", *Business Process Management Journal*, Vol.9, No. 5, pp. 672-688.
- Chen Y., Zhang G.Z., Hu D.F., and Wang S.S., (2006), "Customer Segmentation in Customer Relationship Management Based on Data Mining, Knowledge Enterprise, Intelligent Strategies in Product Design, Manufacturing, and Management", Vol. 207, pp.288-293.
- Coltman T., Devinney T.M., and Midgley D.F. (2010), "Customer Relationship Management and Firm Performance", *Journal of Information Technology*, available at: <http://works.bepress.com/tcoltman/29> (accessed 15 April 2012).
- Croteau, A. and Li, P. (2003), "Critical success factors of CRM technological initiatives", *Canadian Journal of Administrative Sciences*, Vol. 20, No. 1, pp. 21-34.
- Eggert, A., Ulaga W., and Schultz F. (2006), "Value creation in the relationship lifecycle: A quasi-longitudinal analysis", *Industrial Marketing Management*, Vol. 35, pp. 20-27.
- Finnegan, D.J., and Currie, W.L. (2009), "A multi-layered approach to CRM implementation: An integration perspective", *European Management Journal*, Vol. 21, pp. 46-66.

- Foss B., Stone M., and Ekincy Y., (2008), "What makes for CRM systems success-or failure?," *Journal of Database Marketing & Customer Strategy Management*, Vol.15, pp. 68–78.
- Freeman, P., and Seddon, P.B., (2005), "Benefits from CRM-Based Work Systems," *Proceedings of the European Conference on Information Systems (ECIS)*, Regensburg, 2005.
- Freeman, P., Seddon, P.B., and Scheepers, R., (2007). "Explaining Organisational Investments in CRM Point Solutions", *Proceedings of the 15th European Conference on Information Systems*, St Gallen, Switzerland, 2007.
- Friedrich, I., Sprenger, J., and Breitner, M. H. (2010), "CRM Evaluation - An Approach for Selecting Suitable Software Packages", *Proceedings of the Tagungsband Multikonferenz Wirtschaftsinformatik*, Göttingen, Germany, pp. 611-622.
- Gartner Group, (2000), "Putting Customer relationship management to work", The Gartner Group, Stamford, CT.
- Gartner Group, (2009), "CRM failure rates 2001-2009", available at: <http://www.zdnet.com/blog/projectfailures/crm-failure-rates-2001-2009/4967> (accessed 12 April 2012)
- Giga J., (2001), "Seven out of ten CRM projects fail, *Computing Journal*, Vol. of August, No. 1, pp. 27-39.
- Goodhue, D.L., B.H. Wixom, and H.J. Watson. (2002), "Realizing business benefits through CRM: Hitting the right target in the right way, *MIS Quarterly Executive*, Vol. 1, No. 2, pp. 79-94.
- Gopalakrishnan, S., and Damanpour F. (1994), "Patterns of generation and adoption of innovation in organizations: Contingency models of innovation attributes, *Journal of Engineering and Technology Management*, Vol. 11, pp. 95-116.
- Grabner-Kraeuter, S., Moedritscher, G., Waiguny, M., and Mussnig, W. (2007), "Performance monitoring of CRM initiatives", *Proceedings of the 40th Annual Hawaii International Conference on System Sciences*, Hawaii, 2007.
- Harej, K., and Horvat, R. (2004), "Customer Relationship Management Momentum for Business Improvement, *Proceedings of the 26th International Conference on information Technology Interfaces*, Cavtat, Croatia, 2004.
- Heygate, R. (2001), "Improving the Return on Investment from CRM: an Introduction", available at: <http://www.crm-forum.com/cgi-bin/item.cgi?id=66242> (Accessed 15 April 2012).
- Howcroft, D. and Light, B. (2006), "Reflections on issues of power in packaged software selection". *Inform. Systems Journal*, Vol. 16, No.3, pp. 215–235.
- Jones, E., Sundaram, S., and Chin, W. (2002), "Factors leading to sales force automation use: a longitudinal analysis", *Journal of Personal Selling and Sales Management*, Vol. 22, pp. 145-156.
- Jones, E., Brown, S. P., Zoltners A.A., and Weitz, B.A. (2005), "The changing environment of selling and sales management", *Journal of Personal Selling*, Vol. 25, pp. 105-111.
- Kamakura, W. A., Mittal, V., de Rosa, F., and Mazzon, J. A. (2002), "Assessing the service profit chain", *Marketing Science*, Vol. 21, No. 3, pp. 294–317.
- Kim, J., Suh, E., and Hwang, H. (2003), "A model for evaluating the effectiveness of CRM using the balanced Scorecard", *Journal of Interactive Marketing*, Vol. 17, No. 2, pp. 27-28.
- Ko E., Kincade D.H., and Brown J.R., (2000), "Impact of business strategy on the adoption of quick response technologies: the apparel industry experience", *International Journal of Operations and Production Management*, Vol. 20, No. 9, pp. 1093–1111.
- Ko, E., Kim, S. H., Kim, M., and Woo, J. Y. (2008), "Organizational characteristics and the CRM adoption process", *Journal of Business Research*, Vol. 61, pp. 65-74.
- Leigh, T.W., and Tanner, J.F. (2004), "Introduction: JPSSM special issue on customer relationship management", *Journal of Personal Selling and Sales Management*, Vol. 24 No.4, pp.259-62.
- Light, B. (2003), "CRM packaged software: A study of organizational experiences, *Business Process Management Journal*, Vol. 9, No. 5, pp. 603–616.
- Ou, C.X., and Banerjee, P.K. (2009), "Determinants of Successful Customer Relationship Management," *Journal of Information Technology Management*," Vol. 20, No.1, pp. 56-66.
- Park, C.H., and Kim, Y. (2003), "A framework of dynamic CRM linking marketing with information strategy/", *Business Process Management Journal*, Vol.9, No.5, pp. 652-671.
- Paulissen K., Mills K., Brengman M., Fjermestad J., and Romano N.C.Jr. (2007), "Voids in the Current CRM Literature: Academic Literature Review and Classification (2000-2005)", *Proceedings of the 40th Annual Hawaii International Conference on System Sciences*, Hawaii, 2007.
- Peltier, J.W., Schibrowsky, J.A., and Zhao, Y. (2009), "Understanding the antecedents to the adoption of CRM technology by small retailers: Entrepreneurs vs. owner-managers", *International Small Business Journal*, Vol. 27, No 3, pp. 307–336.
- Ramdani, B., Kawalek, P., and Lorenzo, O. (2009), " Knowledge management and enterprise systems adoption by SMEs: Predicting SMEs' adoption of enterprise systems", *Journal of Enterprise Information Management*, Vol.22, No. 1/2, pp. 10-24.
- Reinartz, W., and Kumar, V. (2000), "On the profitability of long lifetime customers: An empirical investigation and implications for marketing, *Journal of Marketing*, Vol. 64, pp. 17–35.

- Riyad, E. (2007), "Towards a Successful CRM Implementation in Banks: An Integrated Model", *The Service Industries Journal*, Vol. 27, pp. 1021-1039.
- Richards, K.A, Jones, E. (2008), "Customer relationship management: Finding value drivers" *Industrial Marketing Management*, Vol. 37, p. 126.
- Rogers, E. (1995), *Diffusion of Innovations*, 4th edition, New York: Free Press, New York.
- Rust, R.T., Lemon, K.N., and Zeithaml, V.A. (2004), "Return on marketing: Using customer equity to focus marketing strategy", *Journal of Marketing*, Vol. 68, pp. 109–127
- Schubert, P., Williams, S.P. (2009b), "An Extended Framework for Comparing Expectations and Realized Benefits of Enterprise Systems Implementations", *Proceedings of the 15th Americas Conference on Information Systems*, San Francisco, California, 2009.
- Williams, S.P., and Schubert, P. (2010), "Benefits of Enterprise Systems Use", *Proceedings of the Hawaii International Conference on System Science (HICSS)*, Hawaii, 2010.
- Sarmaniotis, C. and Stefanou, C.J. (2005), "A Framework of CRM Development Phases and Key Success Factors" In the *Proceedings of the 2nd International Conference on Enterprise Systems and Accounting (ICESAcc '05)*, Thessaloniki, Greece, pp. 477-495.
- Shanks, G., Jagielska, I., and Jayaganesh, M. (2009), "A Framework for Understanding Customer Relationship Management Systems Benefits" *Communications of the Association for Information Systems*, Vol. 25, p. 26.
- Sigala, M. (2004), "Customer Relationship Management (CRM) Evaluation: Diffusing CRM Benefits into Business Processes", *Proceedings of ECIS Conference*, Turku, Finland, 2004.
- Sophonthummapharn, K. (2009), 'The adoption of techno-relationship innovations: a framework for electronic customer relationship management', *Marketing Intelligence and Planning*, Vol. 27, No. 3, pp.380–412.
- Spekman, R.E., and Carraway, R. (2006), "Making the transition to collaborative buyer–seller relationships: an emerging framework, *Industrial Marketing Management*, Vol. 35, pp. 10–19.
- Staehr, L. (2007), "Assessing Business Benefits from ERP Systems: An Improved ERP Benefits Framework, *Proceedings of the 28th International Conference on Information Systems*, Montreal, 2007, pp. 1-15.
- Van Bennekom, F.C., and Blaisdell, M. (2000), "How broad, how deep: lessons from a CRM implementation", *Cutter IT Journal*, Vol. 13 No.10, pp.12-16.
- Verhoef P.C., (2003), "Understanding the effect of Customer Relationship Management Efforts on Customer retention and Customer share development", *Journal of Marketing*, Vol. 67, No. 4, pp. 30-45.
- Agarwal, R., and Prasad, J. (1998), "A conceptual and operational definition of personal innovativeness in the domain of information technology", *Information Systems Research*, Vol. 9, No. 2, pp. 204–215.
- Bengtsson, M., Boter, H., and Vanyushyn, V. (2007), "Integrating the Internet and marketing operations: A study of antecedents in firms of different size", *International Small Business Journal*, Vol. 25, No. 1, pp. 27-48.
- Bhattacharjee, A. (2000), "Acceptance of E-Commerce Services: The Case of Electronic Brokerages", *IEEE Transactions on Systems, Man and Cybernetics*, Vol. 30, No. 4, pp. 411-420.
- Chen R. S., Wu R.C., and Chen, J.Y. (2005), "Data Mining Application in CRM of Credit Card businesses", *Proceedings of the IEEE International Conference on e-Technology, e-Commerce and e-Service*, Hong Kong, 2005.
- Ebner, M., Hu, A., Levitt, D., and McCorry, J. (2002), "How to Rescue CRM", *McKinsey Quarterly*, Special Edition: Technology, pp. 49-57.
- Goodman, J., and Truss, C. (2004), "The medium and the message: communicating effectively during a major change initiative", *Journal of Change Management*, Vol. 4, No. 3, pp. 217–28.
- Gupta M.P., and Shukla S. (2002), "Learnings from Customer Relationship Management (CRM) Implementation in a Bank. *Global Business Review*, Vol. 3, No. 1, pp. 99-122
- Hung, Y.C., Huang, S.M., Lin, Q.P., and Tsai, M.L. (2005), "Critical factors in adopting a knowledge management system for the pharmaceutical industry", *Industrial Management and Data Systems*, Vol. 105, No. 2, pp. 164 – 183.
- Kara, A., Spillan, J.E., and DeShields, O.W. (2005), "Effect of a market orientation on business performance: a study of small-sized service retailers using MARKOR scale", *Journal of Small Business Management*, Vol. 43 No. 2, pp. 105-18.
- McCole, P., and Ramsey, E. (2004), "Internet-enabled technology in knowledge-intensive business services: a comparison of Northern Ireland, the Republic of Ireland and New Zealand", *Marketing Intelligence & Planning*, Vol. 22 No.6/7, pp.761.
- McGee, J. E., and Sawyerr, O. (2003), "Uncertainty and Information Search Activities: A Study of Owner-Managers of Small High-Technology Manufacturing Firms", *Journal of Small Business Management*, Vol. 41, No. 4, 385-401.
- Morris, M.H., Schindehutte M., and La Forge, R.W., (2002), "Entrepreneurial marketing: a construct for integrating emerging entrepreneurship and marketing perspectives", *Journal of Marketing Theory and Practice* 10, No. 4, pp.1–19.
- Nielsen, J.F., Host, V., Jaensson, J-E., Kock, S., and Selnes, F. (2003), "Market orientation in Nordic banks: does nationality matter?", *European Journal of Marketing*, Vol. 37 No. 11, pp. 1818-41.

- Parasuraman, A. (2000), "Technology Readiness Index (TRI): a multiple item scale to measure readiness to embrace new technologies", *Journal of Service Research*, Vol. 2, No.4, pp. 307-320.
- Peltier, J.W., Schibrowsky, J.A., and Zhao, Y. (2009), "Understanding the antecedents to the adoption of CRM technology by small retailers: Entrepreneurs vs owner-managers. *International Small Business Journal*, Vol. 27, pp. 307–336.;
- Pennings, J.M.E., and Smidts A. (2000), "Assessing the Construct Validity of Risk Attitude," *Management Science Journal*, Vol. 46, pp.1337-1348.
- Radcliffe, J. (2001), "Eight Building Blocks of CRM: A Framework for Success", available at: <http://www.gartner.com/resources/103200/103204/103204.pdf> [accessed 12/02/2012];
- Speier, C., and Venkatesh, V. (2002), "The hidden mind fields in the adoption of sales force automation technologies", *Journal of Marketing*, Vol. 66, pp. 98–111.
- Srinivasan, S.S., Rolph E.A., and Kishore P. (2002), "Customer Loyalty in e-Commerce: An Exploration of its Antecedents and Consequences," *Journal of Retailing*, Vol.78, No. 1, pp. 41-50.
- Stefanou, C.J., Sarmaniotis C., and Stafyla, A. (2003), "CRM and Customer-Centric Knowledge Management: An Empirical Research," *Business Process Management Journal*, Vol.9, N Washington, DC, USAo. 5, pp. 617-34.
- Verhees, F., and Meulenberg, M.T.G. (2004), "Market orientation, innovativeness, product innovation and performance in small firms", *Journal of Small Business Management*, Vol. 42, No. 2, pp. 134-54.