A Model of Market-Orientation Effects of Customer Relationship Management on Organizational Processes

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Abstract

This study constructs a model of CRM (Customer Relationship Management) effects on work practice, value-creation processes, and organizational performance. Through iterative literature review and content analysis, this study builds a preliminary understanding of the possible effects and consequences of CRM use on the overall organizational behaviors and processes. The study then conducts case studies on five credit card companies in Taiwan to gain in-depth knowledge of the chain effects of CRM use. Based on the case studies, five propositions are formed: (a) the greater the use of CRM systems, the greater the market-oriented behavior; (b) the greater the market-oriented behavior, the greater the impact on value-creation processes; (c) the greater the behavioral changes in value-creation processes, the higher the market performance; (d) the greater the market-oriented behavior, the higher the market performance; and (e) the effect of top management initiatives is greater on market-oriented behaviors in the cases of a greater use of CRM than in the cases of a lower use. This research finding provides a base for enhanced understanding of the potential of CRM in different organizational processes and performances. It is hoped that managers of CRM can benefit from the insights presented and implement more effective management of CRM use.

Keywords: Customer relationship management, organizational behaviors, organizational processes, market-orientation

1. Introduction

Customer Relationship Management (CRM) is a methodology that extensively employs information technology, particularly database and Internet technologies, to enhance the effectiveness of relationship marketing practices (Chen and Ching, 2004). It is seen as a vital tool for companies to coordinate all service functions (Chattopadhyay, 2001), automate customer service operations (Karimi et al., 2001), restructure all business processes (Bull, 2003; Couldwell, 1998; Chen and Popvich, 2003; Gurau et al., 2003), and present a unified view of each customer to all those inside the enterprise (Chan, 2005). Because of the limits of human choice, technology use, and organizational design, we need a deeper understanding of the interaction between technology and organizations.

The difference between CRM and IT-enabled software is that the former provides a complete integration between pre-sales, post-sales, procurement, fulfillment, and other organizational processes within the company. An effective CRM strategy has to encompass and integrate all business activities that involve interaction with customers to provide rapid

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and accurate insight information, optimize the interaction with customers, increase the productivity and efficiency, and integrate dissimilar platforms. Moreover, the integrated information that is shared with employee and customers is applied to the business applications, including sales automation, marketing management, customer services and support, research and engineering automation, data analyzing and report generation, and data mining/data warehouse (Lin, 2003).

The existing studies have shown that the use of a CRM system affects work patterns and employee behaviors, enabling organizational transformation from a product orientation to a market orientation with a strong focus on customer and market. However, these researches have primarily emphasized the effects of CRM on customers, market structure, and direct customer interaction processes such as marketing, sales, and customer services (Bose, 2002; Bull, 2003; Bygstad, 2003; Croteau and Li, 2003; Gefen and Ridings, 2002; Hansotia, 2002). Little attention has been paid to the market-orientation effects of CRM and organizational behavioral changes on the whole value-generation processes from marketing and sales, research and development, production, through logistics to fulfillment. Hence, no further information on related management activities and resultant performance is available. The lack of understanding of the impact of CRM on organizational behavior and processes has made the value of CRM ambiguous and difficult to manage.

The objective of the study is to develop a model of CRM effects on employee work patterns, value-creation processes, and performance. Through literature review and content analysis, concepts of the chain effects of CRM on organizational performance and the influential management activities were built. Then, using an in-depth case study of five credit card companies, the model with propositions about the chain effect of CRM use was proposed.

2. CRM use and market-orientation effects

2.1 The use of CRM

Although CRM has been defined clearly as an integration of marketing, sales, and service processes (Baars and Kemper, 2008), social constructivists have argued that the application of identical technologies, even in very similar organizational contexts, can result in very different organizational influences (Barley, 1986; Robey and Sahay, 1996). CRM thus takes many forms depending on the firm’s objectives. Furthermore, business applications of CRM can be classified in different forms: Focusing on either customers or operations (Karimi et al., 2001), movements (Schwede, 2000) in operation automation (Keillor et al., 1997); channel collaboration (Schwartz and Bliedung 2001) or data analysis (Inmon, 1996); or function support for marketing, sales, retention, or product development (Rigby and Ledingham, 2004). However, technology is affected by social action (Orlikowski, 1992). Although all CRM functions are claimed to manage the enterprise-customer relationship, the approach is applied in different areas of different levels of an organization.

By the same token, the information generated and disseminated by the CRM system is also a key enabler in changes of organizational behavior and process (Rigby et al., 2002; Fjermestad and Romano, 2003). This study analyzes CRM usability based on the use of the information. Three areas are critical for understanding the usability of CRM: The technology applied, the scope of the information processed, and fields of information applied. Technologies applied by the CRM approach can include: Call center operation, data-warehousing, data mining, and business intelligence tools. The scope of CRM information processing can include customer service, marketing, sales, and other departments, in either the head office or in individual business units. While areas of CRM information application can include customer service, customer retention, and customer invention, these different types of CRM use can have different impacts on organizational behaviors and processes.
2.2 CRM and market-orientation behavior

The increase of customer centricity has been widely considered one of the most important achievements of CRM implementation (Chen and Popovich, 2003; McDonnell, 2001; Yu, 2001). Terms such as market-oriented, customer-focused, market-driven, and customer-centric have become synonymous with a proactive business strategy in firms worldwide (Deshpande, 1999). CRM users have applied the system seeking to transit from a product orientation to a market orientation (Bose, 2002). Marketing is not a specialized functional activity but rather “The whole business seen from the point of view of its final result”, that is, from the customer’s point of view (Drucker, 1993). Market orientation has been defined, and hence measured, from two interrelated levels of organization, the group teamwork pattern and the individual way of performing customer-related processes.

From the corporate teamwork view, market-orientation is defined as a set of activities or behaviors relating to market intelligence gathering, market intelligence dissemination cross-functionality within a firm, and the action responses based on this intelligence (Kohli et al., 1993). The influence of information technology on group teamwork has been well noted (Clement, 1994). Potential IT (Information Technology) benefits appear in the development of a shared vision among employees for customers of the organization and in better communication among the individuals who make up the organization, which in turn improves mutual understanding. Through the integrated decision-making process, better consensus may be created for subsequent actions.

From the individual behavioral viewpoint, a market-orientation means employees at all levels are free to pursue goals and objectives without the constant intervention of supervisors and the incessant surveillance of controllers (Gandz, 1990). Employee empowerment is demonstrated when employees are encouraged to take initiatives to improve process and to take action (Herrenkohl et al., 1999), and it has been considered a necessity for the modern enterprise (Hoffman, 1994). In an integrated working environment, people will break out of narrow job specifications to find new and better ways of contributing to key business processes, changing and modifying them in the pursuit of good service and improved quality and valueuu (Gandz, 1990). With the application of CRM, employees tend to be more responsive, deal with complaints quickly, work more efficiently, and become well-motivated to serve customers (Lashley, 1995). Several researchers (Clement, 1994; Hoffman, 1994; Malone, 1997; Sayer and Harvey, 1997) have studied the influence of integrated information and technology on employee empowerment in serving customers. The results showed that electronic communications have the potential to empower people through increased information and access. Technological change can serve as a catalyst for organizational realignment by decentralizing decision-making and strengthening user power in user relations with management and enhancing local capability to solve customer problems.

2.3 Top management initiatives for CRM

The management of CRM use is affected by many factors, including data sharing, process change, and employee training, but the most powerful driver seems to be top management (Chen and Popovich, 2003; Pan and Lee, 2003). In the 74 cases reviewed for this study, more than half of the cases showed that under the lead of top management, the key performance indicators were redesigned and related movements such as cross-departmental communication, data sharing, process restructuring, job redefining, and training programs were implemented. It seems that the increased performance of the value-creation processes is strongly affected by the enforcement of customer and market focused team-work across different functions.
Critical factors for CRM success lie within the scope of managing people, processes, and technology for understanding the company’s customers (Chen and Popvich, 2003). Leadership in visioning and strategic planning has been found to be one of the most important factors for CRM success (Galbreath and Rogers, 1999; Rigby and Ledingham, 2004; Tafti, 2002; Yu, 2001). Furthermore, education for the customer-focused transition is another key point in taking full advantage of customer knowledge banks (Bose, 2002; Tafti, 2002). Meanwhile, changes in measurement (Alter, 2004), job definition (Alter, 2004; McDonnell, 2001), and reward systems (Chen and Popvich, 2003; Reinartz et al., 2004) are the additional forces for behavior change. Although some of these success factors are overseen by mid-level managers, companies cannot gain competitive edge from CRM use without top management support.

CRM can provide enormous competitive advantages if implemented in a co-operative environment (Kotorov, 2003). To support the strategic target, organizations strive to tackle entrenched business processes or retool organizational structures (Rigby and Ledingham, 2004). To build an integrated view of the customer, all the value-generating processes need to be streamlined, creating issues of technology integration (Chen and Popvich, 2003) and organizational change management (Tafti, 2002). However, budgeting and planning for continuous integration among internal and external processes and technologies has become one of the most discussed issues in CRM. To acquire full benefits from CRM use, top management plays a critical role in establishing goals, empowering employees to solve customer problems, allocating sufficient resources, and resolving departmental conflicts.

2.4 The impact of CRM on value-creation processes

Value-creating processes are the primary activities of the value chain proposed by Porter (1985). Organizations have invested in CRM to raise process performance (Barua et al., 1995; Tallon et al., 2000; Reinartz et al., 2004) in areas ranging from IT infrastructure, quality improvement projects, process redesign projects, and enterprise systems, to various process integration projects. Process performance denotes a range of measures associated with operational efficiency enhancement within specific business processes such as quality improvement of designed processes and enhanced cycle time within inventory management processes (Melville et al., 2004). Sambamurthy (2001) pointed out that business and IT capabilities, structures, and processes are related to continued success in leveraging IT for superior performance through speed-to-market, operational excellence, cost leadership, and customer intimacy. Meanwhile, organizational processes create and deliver the value proposition for customers (Kaplan and Norton, 2004). Social behaviors within business processes have implications for the effective operation of the process for failure prevention and service recovery (Llewellyn and Armistead, 2000). The performance of internal processes is a leading indicator of subsequent improvements in customer and financial outcomes, since research has revealed positive outcomes, e.g. internal service quality (Davis, 1991) or customer satisfaction (Gremler et al., 1994). Based on the results of content review, behavior changes in both cross-departmental teamwork and empowered individual job performance were observed in several cases. Related process performance was clearly traced as well. In addition to increased efficiencies in sales and marketing, the noted process performance indicators include dynamic R&D, reliable demand forecast, well-planned production, expanded delivery networks, and consistent customer service throughout the service cycle.

2.5 Market performance

Market performance can be viewed in three ways: Customer value, customer satisfaction, and customer loyalty. These indicators show the strength of certain relationships, such as brands or preferences, because they are the aggregate effects of the customer’s perception,
evaluation, and psychological reaction to the consumption experience with a product or service (Roh et al., 2005; Fornell, 1992). Therefore, CRM has been reported to have the ability to track these indices (Croteau and Li, 2003; Kenyo and Vakola, 2003; Ragins and Greco, 2003). Such relationships can result in advantageous market performance. Stamoulis et al. (2002) argued that technology has a definite impact on the business value. With this in mind, the ultimate goal of investment in CRM is to affect these final results.

3. Research methodology

To understand the CRM effect, this study reviewed literature on the use of CRM, CRM and market-orientation behavior changes, top management initiatives for CRM management, the impact of CRM on value-creation processes, and market performance. The research process is depicted in Table 1. The first two steps of knowledge consolidation were applied in building a preliminary understanding of the CRM effect. For this purpose, we collected data from multiple sources: Interviews and secondary sources such as journal articles and cases reported by the five major CRM vendors.

In particular, to understand in-depth the CRM impact of CRM on value-creation processes a thorough review of 70 reported cases by five major CRM vendors (Seibel, SAP, SalesLogix, FrontRange, and Salesforce) was conducted. After case reviews, 37 of the 70 cases were selected for further analysis. The process is similar to content analysis (Bettman and Weitz, 1983; Kotabe and Swan, 1995), where it is applied to the technique for the objective and systematic description of the manifest content of communication (Berelson, 1952) and to entirely analyze existing knowledge developed by both academics and practitioners.

The case selection criteria follow those of Gefen and Ridings (2002), including (a) cases that have applied CRM systems to both operational and analytical functions; (b) cases that have reported CRM effects on both behavior and performance; and (c) cases that attempted to address CRM effects on all value-generating processes. The purpose is to collect data on the effects of CRM on different business processes. Although the presentations of these user cases may have been shaped by vendors for promotion purposes, the presented instances of different processes provide verifiable evidence for understanding the scope and areas of CRM impact. The results are summarized in Table 2.
Table 1. Research process.

<table>
<thead>
<tr>
<th>Steps</th>
<th>Why</th>
<th>How</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Literature review</td>
<td>To find the relationship between CRM and market-orientation</td>
<td>Literature reading and consolidation</td>
<td>Market-orientation effects of CRM use</td>
</tr>
<tr>
<td>2. Content analysis</td>
<td>To explore the impact of CRM on value-generation processes</td>
<td>70 real cases review and consolidation</td>
<td>The effects of CRM use on organizational processes Interview results</td>
</tr>
<tr>
<td>3. Field interviews</td>
<td>To collect data verifying the research model and propositions</td>
<td>5 credit card companies interview</td>
<td>Case studies</td>
</tr>
<tr>
<td>4. Case analysis</td>
<td>To understand the CRM operation and the company background</td>
<td>Analyze interview results and collect public data of companies</td>
<td>Preliminary findings</td>
</tr>
<tr>
<td>5. Cross case analysis</td>
<td>To discover similarities and differences among cases</td>
<td>Analyze interview results and case studies</td>
<td>Propositions and Research model Verified findings</td>
</tr>
<tr>
<td>6. Finding verification</td>
<td>To verify the preliminary findings with interviewees</td>
<td>Telephone interviewees and verify the preliminary findings</td>
<td>Enhanced understand of CRM use</td>
</tr>
<tr>
<td>7. Expert Interviews</td>
<td>To get a richer understanding of the linkage between industry knowledge and the findings</td>
<td>Interview two industry experts</td>
<td></td>
</tr>
<tr>
<td>8. Conclusion</td>
<td>To organize findings and draw a conclusion</td>
<td>Consolidate verified findings, industry knowledge, and relevant literature</td>
<td>Findings and implications</td>
</tr>
</tbody>
</table>

Steps:
1. Literature review
2. Content analysis
3. Field interviews
4. Case analysis
5. Cross case analysis
6. Finding verification
7. Expert Interviews
8. Conclusion
Table 2. Findings of 70 real cases review - changes in behaviors and processes.

<table>
<thead>
<tr>
<th>Process</th>
<th>Changes in behavior</th>
<th>Impacts on processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales and marketing</td>
<td>• Local market knowledge sharing and analysis</td>
<td>• Target chosen market segments, micro-segments more precisely.</td>
</tr>
<tr>
<td>Inbound logistics</td>
<td>• Work closely with front-end departments for planning procurement and managing warehouse</td>
<td>• Better forecasts on demand</td>
</tr>
<tr>
<td></td>
<td>• Target chosen market segments, micro-segments more precisely.</td>
<td>• Increased purchasing efficiency</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>• Collect market and customer information from all business functions</td>
<td>• Dynamic R&amp;D and spot trends accurately</td>
</tr>
<tr>
<td>Production</td>
<td>• Cross-departmental planning and proactively sharing information with other departments</td>
<td>• Effectively address the operational requirements</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Forecasting accuracy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Productivity</td>
</tr>
<tr>
<td>Outbound logistics</td>
<td>• Shared on-demand assess to customer data from any location by all partners</td>
<td>• Effectively address the logistical and follow-up requirements of events</td>
</tr>
<tr>
<td></td>
<td>• Empower employees in serving customers</td>
<td>• Expanding distribution network</td>
</tr>
<tr>
<td></td>
<td>• Staff and managers have access to all the data they need to keep customers happy, which made staff more proactive in solving customer problems</td>
<td></td>
</tr>
<tr>
<td>Customer service fulfillment</td>
<td>• Tightly-built chain of service information</td>
<td>• Consistent service on customers throughout the service cycle</td>
</tr>
<tr>
<td></td>
<td>• Empowered employees in fulfilling customer requests</td>
<td>• Direct interaction with customers and retailers helping retailers solve their customer’s problem</td>
</tr>
<tr>
<td></td>
<td>• Employees coordinate with departments in serving customers</td>
<td></td>
</tr>
</tbody>
</table>

The literature review and public case analysis were performed iteratively for the enhancement of the understanding of the studied concept (as described in Table 3), and then descriptive points about CRM use (shown in appendix) were developed for elaboration of user behaviors.

Next, a multiple case study methodology is used to collect and analyze the data, as well as facilitate the exploratory nature of the contextual analysis (Yin, 1994), and it is an ideal methodology when a holistic, in-depth investigation is needed (Feagin et al., 1991). This is a process of induction from observing real world examples to deduce specific propositions to be tested and finally generalize the results (Mentzer and Flint, 1997).
Table 3. Descriptions of the research concept.

<table>
<thead>
<tr>
<th>Market-orientation behaviors</th>
<th>Value-creation process</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Department</td>
<td>1. Marketing and sales</td>
</tr>
<tr>
<td>(1) Intelligence generation</td>
<td>2. R&amp;D</td>
</tr>
<tr>
<td>(2) Intelligence dissemination</td>
<td>3. Production</td>
</tr>
<tr>
<td>(3) Responsiveness</td>
<td>4. Logistics</td>
</tr>
<tr>
<td>2. Empowerment</td>
<td>5. Fulfillment</td>
</tr>
</tbody>
</table>

Top management initiatives

| 1. Understanding of CRM   | 1. The technology applied |
| 2. Substantial commitment | 2. The scope of the information processed |
| 3. Practical executives   | 3. The area of CRM information application |
| 4. Top management enforcement | Market performance |
| 5. Measurement of the results | 1. Customer value |
| 6. Continuous improvement | 2. Customer satisfaction |
|                             | 3. Customer loyalty |

There are several reasons for the use of this methodology. First, CRM is still a field undergoing innovation. As a result, it is highly multifaceted and a general understanding is difficult to construct without sufficient analysis of the context. The research process has a prescribed formula and new ideas, and this study provides a roadmap for validating the framework, while extending research into CRM in several areas, including a priori specification of constructs, triangulation of multiple managers, and cross-case analyses. Case study research approaches are especially appropriate in new topic areas. Second, this study investigates, in depth, the suitability of the propositions. Yin (1994) argued that data analysis of a case study is for examining, categorizing, tabulating, and recombining the evidence to address the initial propositions of a study. The process described herein is strongly data-driven, drawing on a wide variety of data in identifying the propositions. Third, a multiple case study approach is used to explore how the propositions perform in different environments. For such a research both typical and atypical settings should be chosen (Stake, 2006). To triangulate data to support the theories, we selected five companies ranked between the top and the bottom of the industry. These varied cases are used to describe, in detail, various market-orientation effects of CRM and further compares organizational behaviors across the range of high and low performance.

The multiple case study approach was used here to explore the different interpretations of events and to generate propositions of as yet incompletely documented phenomena. After initial discussions with a number of different CRM-using organizations, it was decided that the study would focus on the five credit card companies described in Table 4. The financial services industry, whose transactions are essentially IT-based, has taken an early lead in CRM implementation, and these firms already hold a wealth of information about individual customers (Codington and Wilson, 1994). CRM techniques have been widely adopted by these companies to both provide necessary services and build differentiation in the market. Credit card business by its very nature tends to involve a wide range of customers and products, and good customer relationships are the key for business success in this competitive market. Therefore, the use of CRM is closely related to market performance.
Based on the information provided by the Taiwan Financial Supervisory Commission, there were 36 credit card issuers in Taiwan as of 31 December 2007. To work on well-spread cases, this study selected five companies out of the 36 credit card issuers for case study. These selected cases rank between the top and the bottom in the industry by credit card volume, which is one of the key indicators of market performance. The selected criterion of these particular cases is similar to purposive sampling, which is a common nonprobability method, rather than random sampling. Multiple interviewees from each of several cases were contacted for collecting data on different aspects of CRM operations. The major interviewees are users and managers of CRM systems who understand the operation and effects of the CRM. Three to five business managers were interviewed for each case. Every interviewee took more than an hour. The semi-structured interviews were based on a framework, and the data were transcribed and organized into a table of analysis (shown in Table 5). These cases revealed a variety of organizational behaviors and performances as well as varied settings for CRM practice that formed a rich context for exploring our propositions.

Through case analysis and cross-sectional analysis, the results provided us with the means to refine the generated findings while data were being collected. The third to the sixth steps of the research process used the case studies to propose the model and obtain a richer understanding of the propositions. The interview results were summarized and consolidated in a structural form. Single case analysis was conducted to understand the CRM operation and the company background, while cross case analysis was used to reveal similarities and differences among the cases. After triangulating data from the informants, the study yielded preliminary findings and then verified the findings with the interviewees.

Two industry experts were interviewed, the president of a CRM outsourcing service firm, and an official of the Taiwan Financial Supervisory Commission. The experts analyzed the market conditions and provided industry knowledge based on the verified preliminary findings. Finally, the researchers based their findings on the verified and validated results.

4. Research results

The interview results are summarized in Table 5. Companies A and B are state-run and only focus on CRM use in the call center. The major CRM operations are customer services and management of customer complaints. The call center and service personnel in company A are outsourced and managed by a professional outsourcing company. The department of customer service is in charge of managing outsourcing operations and coordinating other business units and the outsourcing company, as well as reporting to the vice president of

<table>
<thead>
<tr>
<th>Company</th>
<th>CRM technology applied</th>
<th>CRM information used by</th>
<th>Year of CRM use</th>
<th>Market performance ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Call center; information provided for customer service</td>
<td></td>
<td>3</td>
<td>28</td>
</tr>
<tr>
<td>B</td>
<td>Call center; information provided for customer service</td>
<td></td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>C</td>
<td>Call center and data warehousing and data mining, information used by marketing and sales</td>
<td></td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>D</td>
<td>Call center, data warehousing, and data mining, information used by sales and marketing</td>
<td></td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>E</td>
<td>Call center, data warehousing, data mining, and intelligence tools for individual employees, information used by sales, marketing and planning</td>
<td></td>
<td>15</td>
<td>1</td>
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</tbody>
</table>
administration. This department disseminates the customer information collected by the call center to the relevant departments. Although company B has implemented for two years a data warehouse system that serves the entire business, it does not effectively use this system. Its headquarters had a kickoff meeting about a complete CRM that includes all financial data, including analytical and operational CRM modules. The call center and the data warehouse will be involved in the CRM plan, but the call center, for now, will still be operated by the credit card department. Top management clearly realizes the reasons for CRM implementation, but did not effectively allocate adequate resources to the CRM or attend related meetings. Therefore, the lower top management initiative at companies A and B led to limited behavioral change and limited impact on value-creation processes.

Company C and D are very similar. Using the information produced by their CRM systems, they have implemented data storage and data mining, as well as a call center. All their subsidiaries can easily access the system to acquire and analyze the data warehouse, which is run by the IT department. They further established a cross-departmental CRM committee, which stimulates new ideas of cross-selling and shares the information and experiences of each subsidiary. The committee is a success factor that increases the cross-selling rate, improves the cross-departmental communication, and facilitates CRM use. Both firms are in the initial stages of analytical CRM use, each having less than 5 years experience, while the call center of the operational CRM has been completely implemented to service all business units for more than 8 years. Finally, their top management supports CRM use, provides adequate budget and resources for CRM implementation, and attends CRM committee meetings. In these two cases, CRM use led to significant improvement in market-oriented behaviors including intelligence generation, intelligence dissemination, responsiveness, and employee empowerment.
Table 5. Market-orientation effects of CRM use on organizational behaviors and processes.

<table>
<thead>
<tr>
<th>Concept / Company</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
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<tbody>
<tr>
<td><strong>The Use of CRM</strong></td>
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<tr>
<td>The technology</td>
<td>As a channel of</td>
<td>As a channel of</td>
<td>As an informational base by call center and for</td>
<td>As an informational base by call center and for</td>
<td>As a fundamental base by call center and for</td>
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<td>applied</td>
<td>customer by call center</td>
<td>customer by call center</td>
<td>data mining and data warehousing</td>
<td>data mining and data warehousing</td>
<td>data mining and data warehousing</td>
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<tr>
<td>The scope of the</td>
<td>Call center</td>
<td>Call center</td>
<td>Marketing &amp; sales, IT support, and CRM Dept.</td>
<td>Marketing &amp; sales and CRM Dept.</td>
<td>Marketing &amp; sales, BIU, and related Dept.</td>
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<tr>
<td>information</td>
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<td>processed</td>
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<tr>
<td>The area of CRM</td>
<td>In the customer service</td>
<td>In the customer service</td>
<td>In customer relation management for information</td>
<td>In customer relation management for information</td>
<td>Build flexibility in the end-to-end</td>
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<tr>
<td>information</td>
<td>support</td>
<td>support</td>
<td>integration</td>
<td>integration</td>
<td>customer service process for growing purposes</td>
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<td>application</td>
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<td><strong>Market-orientation</strong></td>
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<tr>
<td>Intelligence</td>
<td>Investigate customer</td>
<td>Market research</td>
<td>Market research Investigate customer preference</td>
<td>Market research Investigate customer preference</td>
<td>CRM has little impact (because the firm had</td>
</tr>
<tr>
<td>Generation</td>
<td>needs</td>
<td></td>
<td>change</td>
<td>change</td>
<td>been a highly market-oriented firm early.)</td>
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<tr>
<td></td>
<td></td>
<td></td>
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Company E has established an international and multi-faceted financial entity and implemented an analytical CRM for more than 15 years, providing coordinated services to its customers. The CRM systems, which include a database, data mining, and business intelligence, are controlled and maintained by the IT department and serve every business unit. Employees of the marketing and sales departments of each business unit are major end users who directly use the CRM to analyze customer behaviors and preferences. Moreover, marketers can independently form a campaign targeting the customers of other business groups without pre-discussion in a cross-departmental meeting. Company E appears to be a highly market-oriented company where decision makers make decisions based on the analyzed data from the CRM systems and process improvements are based on customer needs.

4.1 A model of organizational effects of CRM

Based on the multiple case study analysis, a model that presents a series of chained effects of CRM use is formed and depicted in Figure 1. These effects are described in the following five propositions. The first four propositions are about CRM effects on market-oriented behavior, value-creation processes, and market performance, whereas the influence of top management initiatives is described in the fifth proposition.

![Figure 1. A model of market-orientation effects of CRM use.](image)

4.1.1 The effects of CRM use on market-oriented behavior

All cases experienced organizational and individual behavioral changes through the use of CRM, with different degrees of change observed. Companies that use CRM for customer services in the call center, such as companies A and B, tend to note changes in the call center areas. As mentioned by the executive officer of company A:

“Although our firm has interdepartmental meetings at least once a quarter to discuss market trends and developments, customer information will be released only to the service department. Meanwhile, the CRM system has had a little impact on unleashing employees’ capabilities.”

Companies using CRM system-produced information for decisions such as companies C and D tend to note higher changes toward market-orientation in all customer-related areas. For example, the assistant manager in company C told us:

“We periodically review the possible effect of changes, such as the effect of regulation on customers, in our business environment. Our department identifies the customers who had stopped using our products for 6 months and investigates why they did so. In
addition to exchanging information in regular interdepartmental meetings, when a department discovers some important information about competitors, it is quick to alert other departments. The CRM system takes forever to decide how to respond to our competitor’s price changes, but we will not ignore changes in our customer’s product or service needs. Furthermore, employees are given the power to call attention to customers’ problems and use CRM to develop comprehensive campaigns against these problems.”

Company E, fluent in applying CRM information in all functional areas, tends to note changes in the market orientation within the firm on an ongoing basis.

Accordingly, the use of a CRM can affect market-oriented behavior within a firm. For this reason, this study proposes the following proposition regarding the differing degree of effect associated with different types of CRM use.

**Proposition 1:** The greater the use of CRM systems, the greater the market-oriented behavior.

### 4.1.2 The effects of the market-oriented behavior on value-creation processes

Because of the limited capabilities of the call center, companies A and B, which use CRM for customer services, only experienced a little behavioral changes, and the value-creation processes were not significantly improved. The division chief in company B told us:

“We did not divide customers into segments in the past, but now we segment customers based on the information provided by the call center. The call center provides product managers with suggestions; however, it is impossible to predict customer requirements so as to manage logistics processes. We do make sure that the customer complaints are immediately resolved, though.”

The call centers in Companies A and B merely collect the information about customer complaints and suggestions and lead to small benefits in intelligence dissemination and responsiveness. Even employee empowerment saw no apparent improvement after implementation of the call center, and stronger CRM capabilities are needed to predict the future customer demands and improve the productivity.

By contrast, companies C, D and E, applying CRM in many cross-departmental areas, have greater market-orientation with greater improvement in their internal processes. The managers of company E pointed out:

“In the credit card division, all marketers have to learn the means to analyze customer information using CRM. Because employees become more market-oriented in this process, they analyze customer data when designing cross-divisional campaigns.”

Therefore, superior performance and improvement of processes are led by the significant focus on customers. We propose the differing degree of effect associated with different behavioral changes as the following proposition.

**Proposition 2:** The greater the market-oriented behavior, the greater the impact on value-creation processes.

### 4.1.3 The effects of the behavior changes in value-creation processes on market performance

The market performance, which is based on the documented market ranking of these companies shown in Table 5, is closely related to the behavior changes in value-generating processes. Companies A and B have lower ranks in the value-creation process and appear to perform at a lower level than companies C, D, and E in the market. For example, the chief in company A described:

“To boost customer numbers, sales personnel visit customers we have lost. Our average score for customer satisfaction index is about 70.”
Further, the manager of company B stated:

"Because we actively modify credit card quotas, many customers wanted to stop their credit cards. The call center retains only 20% of customers."

Some companies that have higher ranks in value-creation process can deliver analyzed information of CRM to the customer service department though process integration, and service personnel can provide customers better product portfolio and service. For instance, a vice president of company C pointed out:

"We can improve customer retention rates through developing customer behavior models in CRM to create campaigns targeted at keeping current customers. Moreover, we can cross-sell credit cards to the customers in the insurance departments."

A manager at Company E, the market leader, indicated,

"Providing value to customers is a fundamental activity in our business. The CRM system has been integrated into many operational processes that need CRM functions to analyze customer data."

In sum, all cases experienced process changes aligned with their market performance, and this study hypothesizes that value-generated processes can affect market performance.

Proposition 3: The greater the behavioral changes in value-creation processes, the higher the market performance.

4.1.4 The effects of the market-oriented behavior on market performance

A glance at Table 5 shows that a market-orientation is strongly associated with market performance. Companies C, D, and E, with stronger market-orientation behavior, appear to have better market performance. It is important to note that several business managers reserved their opinion about the contribution of CRM effects to market performance, because the market changed dramatically in the previous three years. The managers in company D stated:

"The firm has complete records of the CRM results. The indexes account for about 40% of the balanced scored card of customer-related departments and for 10% of the balanced scored card of general departments. These indices directly encourage employees to engage in providing customer satisfaction and increasing customer value."

Tight market competition enables companies to be more focused on markets and customers. Further, mergers and acquisitions may alter the market scope while external circumstances can trigger company movement across different market segments. Company A is the worst performer among the companies we studied, and the executive officer pointed out,

"Although our firm has worked on mass marketing projects, no sales data exist for us to predict customer needs. Hence, we wanted to learn how to manage customer relationships in an organized manner."

Accordingly, the market-orientation of a company is highly aligned with its market performance, and this study argues that market-orientation behavior can affect market performance.

Proposition 4: The greater the market-oriented behavior, the higher the market performance.

4.1.5 The effects of top management initiatives on the relationship between CRM use and market-oriented behavior

Of the five studied cases, companies that experience greater top management commitment tend to experience more behavioral changes toward market-orientation. The top managers in companies A and B pay moderate attention to the use of CRM and delegate responsibility for it to the head of customer service. Within the department, the employees are motivated by the improved productivity and direct feedback from customers. However, teamwork with other
departments is still limited to reactive information sharing. The chief in company A stated, “I really understand why the industry needs to implement CRM. However, employees tend to focus on their work performance rather than pacing market changes.”

Top managers in companies C and D are very much involved in the CRM processes. They lead the cross-departmental committees and conduct CRM meetings at least twice a month. Mr. Chen, CEO of company C, has been nicknamed “super supervisor Chen” by his staff because of his in-depth involvement in the consolidation of customer data and resources across business units. The vice president told us:

“I am the leader of the cross-departmental meetings in our banking segment, and our CRM project leader has enough decision-making power to enforce changes in CRM-related process.”

In addition, the CEO of company D not only leads the meeting and enforces the structural changes but also sits in the training program to demonstrate his adaptation of the CRM approaches. The manager pointed out,

“Because of the rich information provided by CRM, we actively lead, encourage, and facilitate CRM use. Meanwhile, the business has clear short-, middle-, and long-term plans for CRM implementation, and top management makes an effort to improve or, at any rate, respond to the gaps in planning that are discovered through goal metrics.”

The CEO of company E is not as visible as the CEOs of companies C and D in enforcing continuous improvement of CRM, because their CRM processes have become a part of the value-creation process and a part of the corporate culture. It seems that the process improvement has become the norm in the company for a long term strong market-orientation culture. As mentioned by the manager of company E:

“Our CEO has led and enforced the cultural change for more than ten years, and the deeply-built culture has enabled autonomous continuous improvement in the organization.”

Consequently, it is worth emphasizing that initiatives of the top management, though based on CRM use, create values and norms for market-oriented behaviors. Hence, this study proposes:

Proposition 5: The effect of top management initiatives is greater on market-oriented behaviors in the cases of greater use of CRM than in cases of low use.

5. Implications

These cases possess different management foci and effects on organizational culture and processes, resulting in ripple effects on departmental and individual behaviors that lead to changes in various value-generation processes. There are several academic implications. First, the use of CRM has been found to shape the user behavior into a more market-oriented stance in delivering process results as well as collaboration across internal functions (Bull, 2003; Chen and Popvich, 2003; Gurau et al., 2003). The CRM cases reviewed in this study have revealed market-oriented behavioral changes at the team level, including market intelligence generation, market intelligence dissemination, and market intelligence responsiveness (Homburg and Pflesser, 2000; Kohli et al., 1993). In addition, market orientation on the individual level is reflected in employee empowerment. Second, customer-oriented activities impact process performance (Hegde et al., 2005). IT has the ability to affect organizational performance via intermediate process performance (Kuei et al., 2001; Markus et al., 2000). That is to say, the value information systems can improve process outputs (Barua and Mukhopadhyay, 2000). Third, generic business processes should contain all value-generating processes, such as innovation, customer management, and operations (Kaplan and Norton, 2001). Moreover, these processes often result in adoption of a customer-focused market
perspective (Slater and Narver, 1994). Fourth, through organization-wide shared basic values supporting market orientation, organization-wide norms for market orientation, perceptible artifacts of market orientation, and the market-oriented behaviors, organizations reap the main effects of market-oriented behaviors on market performance measures (e.g. Narver and Slater, 1990; Jaworski and Kohli, 1993; Slater and Narver, 1994). Finally, intensive and focused top-management attention on a specific system can guide information collection and exploration for the entire organization (Simons, 1991). With strong leadership from top management, performance measurements can be changed, complimentary training and process changes implemented, cross-departmental work practices altered, and proactive individual behavior encouraged.

For managerial implications, uses of the CRM can be viewed as a growth driver and as a fundamental base for knowledge extension and service innovation. Companies should create cross departmental committees to share information, discuss customer trends, and evaluate product plans, enforcing the generation and dissemination of business intelligence across the enterprise. To build flexibility in the end-to-end customer service process and enhanced CRM processes, they would require external information on competitors and qualitative information on customers. Meanwhile, these firms should accumulate experience in using CRM for both service and analysis in most customer related areas, including marketing and sales, business intelligence unit (BIU), and related departments, to target customers and create micro segmentation of customers. Top management of companies can be involved directly in the CRM team and cross-departmental practice and can allocate relative resources. Problems always can be easily solved by cross departmental meetings, and processes can be flexibly changed. Accordingly, precision and flexibility are the keys for obtaining the best advantage of CRM infrastructure, and continuous improvement is institutionalized with permanent personnel overseeing the rules for managing CRM and organizational processes.

6. Conclusion

Doherty et al. (2006) contend that deployment of duplicate technologies completed in similar situations can result in a variety of social consequences. This study is an important first step in exploring the effects of CRM/performance. The cross-case analysis reveals the similarities and differences between the cases and identifies five propositions. The findings of CRM effects on market-orientation provide a base for enhancing the realization of the potential of CRM in different business situations. It is hoped that managers of CRM can benefit from the insights presented. Although the five selected firms do not represent a complete picture of CRM use, due to industry homogeneity as well as the nation’s competitive environment, the findings here provide a preliminary base for further extension and verification. More extensive studies across different industries in different national settings should be conducted using the CRM effect model constructed in this study. Future research should also conduct an empirical study to validate our research model or examine the management initiatives associated with different types of CRM use to build a complete guide for planning proper strategies of CRM use in different business environments.

References


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Appendix - Descriptive points about CRM effects

Market - Orientation behavior - Departmental (Kohli et al., 1993)

Intelligence generation

CRM system implementation
(a) We meet with customers at least once a year to find out what products or services they will need in the future.
(b) We do a lot of in-house market research.
(c) We are fast to detect changes in our customers’ product preference.
(d) We are fast to detect fundamental shifts in our industry (e.g., competition, technology, regulation).
(e) We periodically review the likely effect of changes in our business environment (e.g., regulation) on customers.

Intelligence dissemination
(a) We have interdepartmental meetings at least once a quarter to discuss market trends and developments.
(b) Marketing personnel spend time discussing customers’ future needs with other functional department.
(c) When something important happens to a major customer in the market, the whole business unit knows about it within a short period.
(d) Data on customer satisfaction are disseminated at all levels in this business unit on a regular basis.
(e) When one department finds out something important about competitors, it is fast to alert other departments.

Responsiveness
(a) It takes us forever to decide how to respond to our competitor’s price changes.
(b) We won’t ignore changes in our customer’s product or service needs.
(c) We periodically review our product development efforts to ensure that they are in line with what customers want.
(d) Several departments get together periodically to plan a response to changes taking place in our business environment.
(e) If a major competitor were to launch an intensive campaign targeted at our customers, we would implement a response immediately.
(f) The activities of the different departments in this business unit are well coordinated.
(g) Customer complaints are paid much attention.
(h) If we came up with a great marketing plan, we probably would be able to implement it in a timely fashion.
(i) When we find that customers would like us to modify a product of service, the departments involved make concerted efforts to do so.

Market - Orientation behavior - Empowerment
(a) Employees are involved in decision making regarding customer problems in their department.
(b) Employees are given the power to make decisions regarding critical customer problems.
(c) Employees’ capabilities can be unleashed openly.
(d) Employees are more creative and proactive when they are serving customers.

Top management initiatives
The top management’s understanding of CRM
(a) Top management really understands why the business needs to implement CRM.
(b) Top management could definitely state expectations of the CRM implementation.
(c) Top management could flexibly respond to the environmental changes.

Substantial commitment
(a) Top management allocates enough time to participate in critical CRM meetings in business.
(b) Top management spends a considerable percentage of their time on CRM.
(c) Top management provides adequate budget and resources for the CRM implementation and the CRM use.

Practical executives
(a) Project leader of CRM has enough decision power to enforce the changes of CRM related processes.
(b) Top management initiates the CRM implementation.

Top management enforcement
(a) Top management actively leads, encourages, and facilitates the CRM use.
(b) Top management could properly deal with the departmental conflict.

Measurement of the results
(a) The business has clear short, middle, and long term plans of CRM.
(b) The business continuously measures the goals of these plans.
(c) The business improves and responds to the lack of plans after goal measuring.
(d) Employees get appropriate reward after goal measuring.
Value-creation process
Marketing and sales
CRM system implementation
(a) Companies could target chosen market segments, micro-segments, or individual customers more precisely.
(b) Companies have positive improvements in marketing and sales processes after CRM implementation.
R&D
(a) A CRM system provides powerful analytic capabilities and enables companies to spot trends.
(b) Companies achieve dynamic R&D through cross-organizational communication.
(c) Companies have positive improvements of R&D processes after CRM implementation.
Production
(a) Customer requirement can be precisely forecasted.
(b) Employees can easily track the customer information and quickly respond to customers.
(c) Productivity is increased after the successful implementation of CRM.
(d) Companies have positive improvements of production processes after CRM implementation.
Logistics
(a) Companies can well manage interactions between their customers and their hundreds of retailers.
(b) Companies can effectively address the logistical and follow-up requirements of events.
(c) Dealers and distributors are supported by information sharing.
(d) Companies have positive improvements of logistics processes after CRM implementation.
Fulfillment
(a) Employees, in every department, can immediately fulfill customer needs.
(b) Response time is decreased after the successful implementation of CRM.
(c) Companies have positive improvements of fulfillment processes after CRM implementation.