AN EMPIRICAL TEST OF ALTERNATIVE CRM IMPLEMENTATION SUCCESS MODELS

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ABSTRACT

This study focuses on the determinants of Customer Relationship Management (CRM) implementation success. It develops three alternative CRM implementation success models that identify the relationships among business case alignment, project coordination, customer data technology, staff readiness, and CRM implementation success. The three alternative models are tested empirically using survey data obtained from U.S. manufacturing firms. Research and managerial implications are discussed.

Keywords: CRM implementation success, Alternative CRM implementation models

INTRODUCTION

Managing customer relationship becomes the focus of interest to many practitioners and academicians in recent years. The term customer relationship management (CRM) comprises many issues including management process design, software tools, and implementation. Many firms equate CRM implementation as some form of adoption of new information storage device, new customer information management, or new sales or marketing automation tools, or packaged software applications. The report card so far on the adoption of CRM related solutions and applications are not that promising. One of the primary reasons for these early failures was due to inappropriate implementation strategy employed by firms (Foss et al. 2008).

Often times, CRM solutions are implemented by the companies to stay competitive or to remain in the business. The critical issue is not whether to adopt CRM solutions but how to adopt them. Recent studies call for studying why CRM implementation has been successful in some companies but so frustrating for many other companies (Boulding et al. 2005; Rogers 2005). While various challenges for successful CRM implementation were identified and discussed in the literature (Bull 2003; Chen and Popovich 2003; Jayachandran et al. 2005), very limited systematic research studies have been conducted in this area. Previsous research studies identified key strategic processes and critical factors in developing, implementing, and assessing CRM activities (Payne and Frow 2005). Exploring the determining factors of CRM implementation success is critical in theory development and successful implementation of various CRM projects and applications. There exists an urgent need for developing and testing a theoretical model of CRM implementation success.

Therefore, this study develops three alternative implementation success models that specify the relationships among project management factors, people factor, customer data technology, and CRM implementation success. This study focuses on this CRM implementation success factors and extends previous research by recognizing the importance of specifying structrual

relationships among the determining factors of technologies, processes, and people. These three alternative models are tested empirically using survey data.

DETERMINANTS OF CRM IMPLEMENTATION SUCCESS

CRM applications and related technologies complement the relationship marketing efforts of a firm and facilitate firms becoming customer-centric. CRM is conceptualized as a business strategy combining business process and technology that seeks to understand and retain a company's customers and develop effective long-term relationship with them (Boulding et al. 2005; Zinkhan 2002). CRM can offer the opportunity to implement relationship marketing on a company-wide basis (Ryals and Knox 2001; Srinivasan and Moorman 2005). When implementing CRM applications and related technologies as a strategic option, many organizational, technical, and cross-functional integration issues arise. Bull (2003) argues that CRM is a complex and holistic concept and should be organized around business processes and the integration of information technologies.

Chen and Popovich (2003) indicate that three key determinants of the CRM implementation are technology, people, and process. They suggest that CRM is an integrated approach of these three components to managing relationships. Parthasarathy and Sohi (1997) argue that CRM implementation involves two stage processes that involve adoption at the organizational level and the level of the individual users. Payne and Frow (2006) identified four critical success factors that include CRM readiness, change management, project management, and employee engagement. When designing CRM project implementation many important issues come to light. One of these issues is that some of the CRM software seem to be a fit all solution. As a result, businesses are trying to implement CRM solutions without performing heavy customization of the software. Therefore, the end result is often times difficult and confusing to work with. As CRM solution companies try to design the silver bullet software, they tend to ignore several aspects of usability. A good example is a creation of proper user interface. Poorly designed user interfaces and a failure to align applications with the way people work can be quite costly for firms implementing CRM solutions (Kemp 2001). CRM implementation success can be affected by the relationship between the complexity of the system and the speed and phasing of its development and roll out (Foss et al. 2008).

One of the key aspects of CRM implementation is user requirements. Goal of every business is to keep their customers satisfied and coming back for more. A good CRM tool can achieve that. User resistance is still the primary stumbling block for the successful implementation of CRM applications. For example, training of the sales force in use of computer technology and CRM applications are often recommended and believed to provide a competitive advantage to business (Morgan and Inks 2001). However, it is also difficult to force people to use something they have gone without for many years.

These previous studies identified three key determinants of CRM implementation success. These determinants include factors related to project management, technology, and people. Next section presents three alternative models that capture the interrelationships among these determinants and implementation success.

THREE ALTERNATIVE MODELS OF CRM IMPLEMENTATION SUCCESS

Based on the logic, theory, and previous studies, three plausible alternative models of CRM implementation success are proposed. Figure 1 presents the three alternative models proposed in this study.

Model 1: Direct Impact Model

The direct impact model (DIM) posits that all three factors (i.e., project management, people, and technology) have direct impacts on CRM implementation success. In this model, all three factors are equally important and prerequisite for successful implementation of CRM.

Model 1 posits that for the successful implementation of CRM applications for a firm, all of the factors need to be assessed and incorporated in the implementation optimization process. Reinartz, Krafft, and Hoyer (2004) found that CRM process implementation has moderately positive effect on company performance in two cross-sectional studies across four different industries. Boulding et al. (2005) assert that the effectiveness of CRM activities depends on the degree of integration of CRM with the existing processes of the firm and preexisting capabilities. They pointed out that effective CRM implementation requires integration of technologies, customers, and employees. Corner and Rogers (2005) indicate that cross-fuctional integration and commitment to change are important determinant of implementation success. Interfunctional cooperation is critical to achieve CRM implementation success (Zablah et al., 2004, Plouffe et al., 2004; Raman et al., 2006). Payne and Frow (2005) suggest that CRM requires a cross-functional integration of processes, people, operations, and marketing capabilities. Nguyen, et al. (2007) show that business case development and implementation plan creation is the key to successful implementation.

Model 2: People-Factor Mediation Model

The People-Factor Mediation Model (PMM) depicts the people factor as the mediator of the relationship between CRM implementation success and CRM project management and technology factors. In this model, the people factor is the most important requirement that directly affects CRM implementation. Previous literature provides ample evidence of the importance of this factor.

This model 2 puts people issues first and then design or select solutions to support implementation in the CRM management process. This model suggests that CRM solutions adopted will fit perfectly to existing employee use and current business processes. Time to train staff and implement company wide use, will be minimal as the solution functionality will simply automate current manual procedures. This will allow business to increase efficiency in their daily operations. Gains for business will vary depending on the level of previous automation and staff proficiency with the former manual process.

CRM applications implemented by the companies to stay competitive or to remain in the business come at a high price tag. These solutions can be either not relevant to company or might require heavy customization to make them useful. To alleviate this problem, a team approach to solutions selection is currently being recommended. In this approach all of the employees who will potentially need to use the solutions get together to work out the set of

needed requirements and resolve business issues first (Almquist, Heaton, and Hall 2002). Hence teams define limits to which company requirements can be extended by the solutions. In doing so, it is most likely the CRM tools will be more heavily used by users. It is well recognized in the literature that the 'buy-in' of the people using CRM systems is a critical success factor (Corner and Rogers 2005). Implementing a CRM strategy involves a wide variety of people including frontline sales, marketing and service providers, business analysts, IT professionals, and other managers (Finnegan and Currie, 2010). Therefore, it is important to consult all stakeholders and sell the conepts and ideas to the potential users.

Model 3: Technology-Factor Mediation Model

The Technology-Factor Mediation Model (TMM) depicts the customer data technology factor as the mediator of the relationship between CRM implementation and project management and people factors. In this model, the customer data technology factor is the most important requirement that directly affects CRM implementation. Firms successfully implementing CRM think about business issues first. They use technology to develop valuable customers, realign processes, and deliver an optimal offer for their customers. Jayachandran et al. (2005) studied the role of CRM technology use in business. Their research finding shows that organizational information processes play an important role in CRM implementation. The information use routine needs to be consistent with the needs of CRM. CRM technology might even have negative impact on customer satisfaction and retention if organizational informational processes are not implemented properly. Abott, Stone, Buttle (2001) found that a completely up-to-date, clean and usable set of customer data is critical for CRM implementation. Technology enables relevant customer information to be readily available throughout the organization (Shum et al. 2008). Technology allows organizations to manage the multiple touch points such that the message or experience is delivered to customers in the most consistent way (Payne and Frow, 2004; Yu, 2001). Customer data infrastructure and quality of customer data have a direct influence on the adoption and success of CRM (Millard 2003; Missi et al. 2005, Friedman 2009). Finnegan and Currie (2010) argue that customer data technology is the heart of the CRM strategy implementation and it is vital to bring the data into a unified database, cleanse it to remove multiple entries for the same customer, standardize the databases, and ensure the accurate distribution of the data to all customer touch points.

METHODOLOGY

This study utilizes a self administered questionnaire method. Business managers and executives from U.S. manufacturing firms in the Midwest region completed the survey. Questionnaires were distributed in person to managers and executives responsible for CRM planning and implementation. Out of the 500 questionnaries distributed, one hundred seventy six usable questionnaires were obtained resulting 35.2 percent response rate.

Measures

The instrument employed in this study contained items measuring three implementation factors of the people, technology, and project management and CRM implementation success. Also included in this inquiry were ancillary items such as current CRM implementation status, employee size, sales volume, and department of the respondents. All subscales of the three

factors were measured by a 5-point Likert scale items anchored by "Strongly Agree" (5) and "Strongly Disagree" (1). The people factor contained one staff readiness scale. This scale measures employee's readiness in customer information use, training in customer information capture, incentives for documenting accurate customer information, training in use of customer profitability and preference information, and investment in customer data management teams. The technology factor contained one subscale of customer data sharing and management. This subscale captures standardization of customer data codes, formats, and definitions as well as customer data handling protocols and policy. The project management factor contained two subscales of business alignment and project coordination. Business alignment subscale measures business case justification and existence of a business unit sponsor in CRM project scoping and oversight. Project coordination subscale captures cross-functional coordination, common goal focus, existence of multi-year CRM plan, and degree of project coordination by a centralized CRM competency center. The CRM implementation success was measured by two 5-point rating scale items measuring fully implementing enterprise-CRM and becoming an industry leader in CRM implementation.

RESULTS

Descriptive Statistics, Factor Analysis, and Reliabilities

The subscales of the three determing factors show neutral to slightly agree values ranging from 6.44 to 14.48. CRM project coordination shows the lowest average value while customer data management shows the highest average value. CRM implementation success shows a mean value of 5.55. The factor analysis results show that all items are loaded on the appropriate factors with no cross-loadings higher than .45. After factor analysis, Crobach's alpha was calculated to assess reliability. The Cronbach alpha reliabilities ranged from .76 to .89 showing acceptable reliability scores for the measures.

Path Analysis Results

The three alternative models proposed in this study were tested using LISREL. In this study, absolute indexes of goodness-of-fit such as chi-square and goodness-of fit index (GFI) are used to evaluate the three alternative models. Relative or incremental fit indexes reflecting the improvement in fit of one model over an alternative are also used to compare models.

The goodness-of-fit indexes for the Direct Impact Model (Model 1) and Technology-factor Mediation Model (Model 3) show a poor fit to the data. The ratios of chi-square to degrees of freedom are 26.7 and 20.3 for the two models. The GFI values are .81 and .82. NFI and CFI values for the two models are much below 0.80 indicating a poor fit. RMSR values of .26 and .23 also indicate a poor fit of the model to the data.

The People Mediation Model (Model 2) provides a significantly better fit than the Direct Impact Model and Technology-factor Mediation Model. The ratio of chi-square to degrees of freedom is 3.57 with p-value of 0.00065. The GFI is 0.97, indicating a well-fitting model. Both NFI and CFI scores of .96 and .97 are also above the 0.90 required for evidence of good fit. The RMSR score of .069 indicates a similar conclusion of good fit.

Of the three alternative models tested, the People-factor Mediation Model (Model 2) shows the best fit to the data. Therefore, the path analysis results of the People-factor Mediation Model is discussed in detail next. The results show that all of the path coefficients of the Dual Mediation Model are significant at the 0.05 level with one exception. CRM project coordination shows a significant positive impact on business case alignment (.51), customer data technology (.44), and staff readiness (.39). Both CRM project coordination and customer data sharing and management show a significant positive impact on staff readiness with path coefficients of .39 and .27 respectively. Business case alignment has no significant effect on staff readiness. Staff readiness shows a significant positive impact (.48) on CRM implementation success.

DISCUSSION

This study attempts to extend our understanding of CRM implementation decision by developing and testing three alternative models of CRM implementation success. The model comparison results show that the people-factor Mediation Model provides the best fit of the model to the data. The subscale factor that directly influences implementation success is staff readiness. This suggests that staff training is a necessary condition for successful implementation of CRM projects (Corner and Rogers 2005; Shum et al. 2008). CRM implementation not supported by adequate training and involvement of the CRM staff members will most likely fail due to lack of project coordination and poor customer data sharing and management practice. This study contributes to the theory development of CRM implementation and related strategy. The findings show the structural relationships among the determining factors related to project management, technology, and people. This study's results will help firms to plan and implement CRM initiatives and applications successfully. The findings have significant managerial implications in implementing CRM applications, tools, and project initiatives. The proposed people-factor mediation model can be used in several different ways in designing, implementing, and managing CRM applications.

While this research provides interesting research findings, the results of the study should be interpreted with care. The responding firms are from the Midwest region and primarily small and medium size firms. Therefore, the generalizability of the findings is somewhat limited. As this study developed measurement scales for the CRM implementation factors, the validation and further improvement of these scales are needed. Further tests of the proposed model with more extensive data are warranted. Future research should also identify additional factors relevant for CRM implementation. These factors can be generic as well as industry/firm specific. Future research should identify and test additional structural relationships by including other relevant determining factors. In addition, the importance weights for all of the factor parameters need to be assessed accurately to evaluate their relative importance and criticality in CRM implementation.

References available upon request from Jeen-Su Lim.