

A Revision on the Impact of IT on CRM Implementation

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Abstract

CRM can be seen as a way to achieve competitive advantage. Moreover, CRM is about identifying a company's best customers and maximizing the value from them by satisfying and retaining those. Therefore, the definition for CRM is "A business strategy to manage interactive customer relationships to optimize long-term customer value and satisfaction". The aim of this study is to identify and seek the opinion of the marketing and technical people in service and manufacturing organizations with regard to influence of information technology on CRM implementation. The views of the two different categories of executives in different organizations are analyzed and presented. Eleven factors which influence the implementation of CRM with regard to information technology have been identified. Based on the opinion of the respondents, it is identified that integrated information systems, fast customer response and the structure of information systems are the first three important factors.

The study concludes that providing integrated information systems, connecting front office and back office and providing value added interactions are some of the recommendations to implement CRM technology into the organizations.

Keywords: CRM, ERP, Z-statistics, Value-added, Front-office and Back-office.

Introduction

Customer Relationship Management (CRM) is a relatively new marketing concept that requires complex information technology solutions rivaling those of Enterprise Resource Planning (ERP) systems. CRM concept is the idea that businesses should select, cultivate and manage the most profitable customer relationships with a view to increasing long-term profitability (CRMguru.com).

Kumar and Ramani⁵ viewed Customer Relationship Management (CRM) as the process of achieving and maintaining an ongoing relationship with customers across multiple customer touch points through differential and tailored treatment of individual customers based on their responses to alternative marketing programs, such that the contribution of each customer to the overall profitability of the firm is maximized. Achieving this goal requires a company to understand its customer base at both the macro and micro levels. At the macro level, customer knowledge is needed for making strategic decisions and to focus

marketing efforts. At the micro level, customer information is needed to deliver personalized products and services to individual customer in order to develop customer loyalty and trust.

CRM facilitates relationships among enterprises and their customers, business suppliers and employees. Therefore, the term "customer", in this sense, refers not only to the end-consumer, but also includes business-to-business customers, channels/distributors/franchises and internal customers¹³.

First of all, it must be understood that at its core, CRM is more than just a set of technologies: it is a process. This fact will be of significant importance to Information Technology (IT) professionals who will be asked to support CRM with information and applications. Furthermore, it is intended to be a repeatable process to ensure ongoing, continually improving and consistent results. Simply stated, CRM comprises the acquisition and deployment of knowledge about customers to enable a company to sell more of their product or service more efficiently.

CRM implementation: Customer Relationship Management (CRM) strategies have gained momentum in recent years. Understanding and responding to customer needs and improving customer service have become important elements of corporate strategy. IT based CRM applications are being used by companies to support corporate strategies.

CRM allows the system to identify the different needs of the different customers, so that products can be target marketed and suggestively sold to the most appropriate clients¹⁴. However, it not only increased facilities that need to be components, it is also the way that they can be used that need to be considered. However, a company has identified the touch point and the areas where information is stored and gathered, there is also need to consider the implementation of the CRM to ensure that when it is used, it adds value and is successful.

Boulding et al¹ construed the scope of CRM as encompassing strategy, management of the dual creation of value, intelligent use of data and technology, acquisition and dissemination of customer knowledge to appropriate stakeholders, development of appropriate (long-term) relationships with specific customers and/or customer groups and the integration of processes across the many areas of the firm and across the network of firms that collaborate to generate customer value. CRM has emerged as a powerful concept to align the interests of a firm and its customers, its success depends upon on both the appropriateness of the firm's CRM strategy and CRM

implementation effectiveness. Although there appears to be general consensus on the importance of CRM as a strategic imperative among both academics and managers, the returns on investments in CRM strategy and programs seem to vary, both within and across organizations.

CRM and IT: Exploitation of IT that will facilitate the use and management of information, is regarded as one of the key contributors to future marketing success, both for large and small firms. IT plays an important role in CRM, enabling the assembly of customer information and the creation of customer knowledge, which is critical for maintaining customer relationships². Ryals and Payne stress that CRM seeks to provide a strategic bridge between IT strategies and marketing strategies in building long-term relationships and profitability.

The trend toward IT-enabled management of customer relationships has different origins, of which a principal one is a supply-side push from the IT industry. Moreover, technological advances have increased the number of marketing channels and also have precipitated changes in shopping behavior. At the same time, developments have increased the potential for data capture and extended the capabilities of data management. IT-enabled channels such as the Internet, have made it possible to deal with a segment of one and allow one-to-one dialogue with current or prospective customers in which the product configuration, price and required service can be negotiated individually.

Review of Literature

Powell¹¹ explained that the study of IT adoption in the retail sector showed that IT alone does not produce sustainable performance advantages, but that some firms have gained advantages by using IT to leverage intangible, complementary human and business resources such as flexible culture, strategic planning, IT integration and supplier relationships. To deliver sustained advantage, IT must be embedded in and complemented by other non-IT based resources. This is clearly the case with CRM technology, which must be embedded in and complemented by the associated strategy, work processes and staff skill sets that must be implemented alongside technology.

Mitchell⁸ explained that CRM systems capture a broad range of information about customers such as product purchase history, product satisfaction and customer contact with sales, marketing, support and service departments. Organizations use CRM to collect, store and analyze customer behavior information in view of attracting and retaining their customers.

Cooper et al² stated that information technology is undoubtedly playing an overwhelming and non-replaceable role in all CRM technological initiatives so that it is an enabler to assembling customer information and creating customer knowledge. Galimi⁴ described that CRM, like any other IT innovation, is not solely technology-driven. CRM is

believed to be one of the broadest innovations that organizations have encountered so far since CRM technological initiatives normally imply the implementation of customer-centric business strategy, a redesign of functional activities and a re-engineering of work processes.

Mahmood⁶ explained that the difficulties in demonstrating the effects of growing IT investments on organizational performance have given way to an increasing debate in the study of IT impact on organizational performance. IT impact refers to the organizational benefits from the embedding of technology in products and services offerings as a result of IT investments.

Simon Kriss¹² stated that driving a technology project most would assume that knowing what the customer wants is enough to ensure success. Many companies go further by making sure that the technology solution fits within the IT architecture. Despite all this, many companies have failed in their CRM implementations.

Salesforce.com identified that CRM processes and technologies must keep pace with or ideally stay ahead of changes in market and customer base. If searching for the right CRM technology for the organization, re-evaluating current use of CRM, or looking to derive more value from an existing investment, understanding the essential factors of CRM success can help to get the best results. CRM essentials distill best practices, lessons learnt and collective insights from salesforce.com's 35,000+ customers as well as industry experts across various company sizes, geographies and vertical markets. The eight CRM essentials are: rapid time to value, point-and-click customization, 360-degree customer view, real-time visibility, no more dirty data, high adoption, extending success and a broad community. If a business cares about cultivating strong customer relationships, these essential elements of successful CRM provide valuable guidance for own CRM initiatives.

NASCIO⁹ explained that the proven customer relationship service strategies and tactics are essential in maintaining and growing enterprise IT services. Customer-focused enterprises mobilize the entire state technology office to better serve agency customers, locking in long-term relationships that benefit both the agencies and the technology office.

Mario Caldeira et al¹⁷ stated that although information systems and technology play an important role in CRM implementation, CRM is much more than technology and there is empirical evidence in the literature that a very high percentage of CRM projects fail to fulfill management expectations and business requirements. In this study, the author discussed that why CRM projects fail and look at the concept of Enterprise Architecture to explain CRM failure. It is argued that the development of competences in the organization to deal with unstructured decision making, difficult to program, is a critical issue for CRM success.

Methodology

The study adopted descriptive method of research and employed survey method to collect data.

Primary Data: Marketing managers and technical associates were chosen to get their views and opinions on the impact of IT on CRM implementation. Some of them are interviewed to get their opinions and inputs on what extent the Information Technology influences the CRM Implementation in the company in which they are working at present.

Secondary Data: Information about the IT structure of CRM implementation is gathered from various books, magazines, journals and websites.

Choice of Organizations: In the current study, both manufacturing and service sectors are selected. The data was collected from Visakhapatnam, Hyderabad and Bangalore based companies in South India from the industries in these cities.

Sampling

The questionnaire was pre-tested using a sample of 306 respondents. It was revised and validated. The samples were selected by using quota sampling technique among the target sectors. Within the sectors, convenience sampling method was used.

Results and Discussion

Comparison of Mean Scores:

- Chi square test is performed to compare the mean difference between the scores of different factors between service and manufacturing industries. Similar comparison is made between technical associates and marketing managers.

Profile of the Respondents: The sales and marketing departments are usually the initiators and planners for the implementation of CRM as part of their marketing plans. The respondents from the IT department are the facilitators for the implementation and functionality of the CRM programs.

Type of Industry by Job Position: Table 1 shows distribution of respondents by type of industry and job position. Among the respondents, 57.2% are from service industry and 42.8% are from manufacturing industry. Technical associates constitute 54.1% from service and 45.9% from manufacturing industry. Marketing managers' responses are 61.2% from service and 38.8% from manufacturing industry. It can be observed that response from marketing managers is lesser from both the service and manufacturing industries.

Eleven items measure the organization's capability in using CRM technology while implementing CRM applications. These items are listed in table 5.

Table 2 shows information technology by type of industry. Chi square test shows that there is no significant impact of type of industry on the organization's actual technological resources, top management support, knowledge management capabilities and the relationship between organization structure and processes, IT infrastructure and effective use of IT in customer service. There is no significant difference between service and manufacturing industries. It is observed that 23.4 % of service industry and 33.6% of manufacturing industry responded with low scores. In contrast, 37.7% service industry and 26.7% of manufacturing industry responded with high scores. Since Chi-square test has shown no significant association, z-test is performed to compare the actual scores.

The null hypothesis is H0: Mean score of Information Technology is same in both industries. Table 3 shows Z-statistics for information technology and type of industry.

It can be concluded with the help of chi square test that there is highly significant difference between technical associates and marketing managers with reference to the IT infrastructure maintained by the organizations. The responses of technical associates are more than the marketing managers. It is observed that 47.1 % of technical associates and 14.9% of marketing managers are responded with high scores. It is found that 52.2% of marketing managers responded and 8.7% of technical associates responded with the low scores (Table 4).

Table 1
Distribution of respondents by Type of Industry and Job Position

Type of Industry	Job Position		TOTAL
	Technical Associates	Marketing Managers	
Service	93 (54.1%)	82 (61.2%)	175 (57.2%)
Manufacturing	79 (45.9%)	52 (38.8%)	131 (42.8%)
Total	172 (100%)	134 (100%)	306 (100%)

Table 2
Information Technology by Type of Industry

Information Technology	Type of Industry		Total
	Service	Manufacturing	
Low	41 (23.4%)	44 (33.6%)	85 (27.8%)
Medium	68 (38.9%)	52 (39.7%)	120 (39.2%)
High	66 (37.7%)	35 (26.7%)	101 (33.0%)
Total	175 (100%)	131 (100%)	306 (100%)

Chi-square Value = 5.542

P-Value = 0.063 (Not Significant)

Table 3
Z -Statistics for Information Technology by Type of Industry

	Service	Manufacturing
Mean	68.37	66.45
Standard deviation	5.18	4.95
Mean difference	1.92	
p- value	0.001**	
z-test	3.268	

** Significant at 1% level

Table 4
Information Technology by Job Position

Information Technology	Job Position		Total
	Technical Associates	Marketing Managers	
Low	15 (8.7%)	70 (52.2%)	85 (27.8%)
Medium	76 (44.2%)	44 (32.8%)	120 (39.2%)
High	81 (47.1%)	20 (14.9%)	101 (33.0%)
Total	172 (100%)	134 (100%)	306 (100%)

Chi-square Value = 77.438

P-Value = 0.001 (Significant at 1% level)

Table 5
Ranking of Information Technology factors

Factors	Mean
Integrated Information System	7.168
Fast Customer Response	6.601
Information System Structure	6.583
Empower Employees	6.508
Organization Vision	6.470
Capture Customer Data	6.053
Centralized Database	5.872
Employee Expertise	5.468
Authentic Customer Information	5.138
Data sharing Technology	5.129
Predict Customer Expectations	5.004

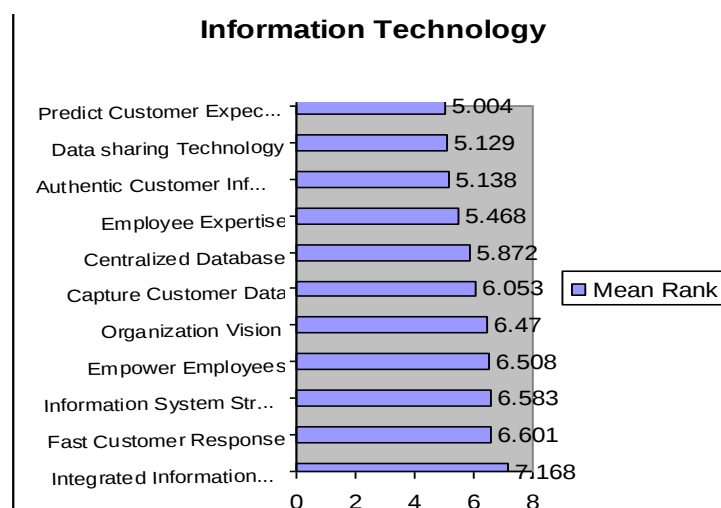


Figure 1: Ranking of Information Technology factors

Table 5 shows the ranking of Information Technology factors which influence the infrastructure for CRM implementation. Integrated information systems, fast customer response and the structure of information systems are the important factors identified by the respondents. These factors influence the organization's actual technological resources and the effective use of IT in customer service. Within these factors, "Integrated Information Systems" with a mean of 7.168 has got highest rank.

Conclusion and Suggestions

It is found that implementation of IT infrastructure is important for CRM implementation. Service industries and technical associates identified that IT related infrastructure increases the usefulness of CRM applications. Out of the eleven factors related to IT, it is found that integrated information systems, fast customer response and structure of information system are the technological resources which influence the implementation of CRM.

Integrated Information Systems: As flexibility, adaptability and speed become winning elements of corporate success, IT becomes more critical than ever. Organizations need to provide the basis for rapid response and the adjustment of business models in order to keep pace with changing market conditions. Organizations must be able to realize quick time to meet immediate business needs and short-term goals. At the same time, they must be able to uphold their long-term business strategy and should adapt to changing business needs in order to become a truly customer-centric enterprise and should maximize their return on investment in the long run.

Transforming core business processes to create strategic advantage increasingly involves people, processes and information across multiple organizations and systems. IT architectures that supported process automation in a departmental context must evolve according to business needs. They must seamlessly integrate processes and information from disparate applications regardless of where

they reside. They must enable collaboration between departments and divisions, suppliers, partners and customers, as well as manage and adapt processes to the pace of business change.

Innovative organizations should recognize the value of an enterprise service-oriented architecture that finally bridges the gap between business needs and IT delivery. With such a framework for developing services based enterprise-scale business solutions, organizations can leverage existing systems to build and deploy flexible solutions that support end-to-end business scenarios across heterogeneous landscapes. Utilizing Web services, they can have the flexibility to delegate parts of an overall business process to different parts of the organization or to internal operations of their business partners. Adopters of such a framework will be able to realize dramatic efficiency improvements, will find new ways to provide value to their partners and customers, will create new business opportunities and will move closer to the vision of a real-time, value-networked enterprise.

Connecting front office and back office: A CRM strategy focused on the front line can work pretty to improve customer relations. The sales team improves its productivity and can spend more time with customers; marketing campaigns are more effective generating more leads that sale reps can turn into more deals – driving revenue to new heights. Organizations need to improve call center efficiency to handle all the complaints. Every day, organizations are losing substantial revenue simply because they fail to connect their front and back offices to close the loop on business processes from end to end. Without a true 360-degree view of their customers and customer information visible across the organization, companies may miss important opportunities to up-sell, advance product quality, improve business processes and spur product innovation.

While companies have separately improved frontline efficiency and optimized their supply chain, disconnected departments, disjoint processes and systems and

bureaucratic procedures are still leading to customer frustration and lost sales opportunities.

Organizations can no longer afford to view CRM, SCM and enterprise resource planning (ERP) as separate initiatives. Synchronizing front-office, back-office and supply chain activities is critical to attracting and retaining customers, fulfilling demand and delivering on service promises. Aligning the front and back office just for end-to-end order management, for example, will yield measurable returns on a number of key indicators such as shorter order cycle times, increased order accuracy, reduced number of incomplete orders, fewer billing disputes, fewer order status calls and lower inventory costs.

Value added interactions: Value added interactions are preferred by the manufacturing industry as one of the major factor in measuring the capability of the organization. Many organizations, particularly in manufacturing industries, have focused on building a high-performing supply chain with highly flexible, fully-integrated, multi tiered networks.

Now it is time for organizations in service industries to engage in similar endeavors to intensify collaboration with both sales and service partners in order to improve the demand and support chains to drive more revenue through indirect channels and to reduce channel costs. This requires consistently identifying and targeting the right partners that can provide complementary products, can promote their brand and can deliver value-add services.

Organizations should provide partners with the knowledge, tools and expert advice needed to sell more effectively and to serve the customers. They enable partners with easy order capabilities and online access to see timely, accurate information about product availability, pricing, shipment and so on, eliminating manual, error-prone and costly support processes.

Front-line Information System: To increase the usefulness of CRM implementation requires front-line information system that shares relevant customer information across all interface units. Relational data base, data warehousing and data mining tools are thus very valuable for CRM systems and solutions. CRM solutions platform needs to be based on interactive technology and processes. It will assist the company in developing and enhancing customer interaction.

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