

**Effectiveness of CRM Solution
in Improving Efficiency of Supply Chain :
The case of Auto-component Industries.**

**Yogesh Kulkarni
Dr. Anil Keskar
Manasi Ajotikar**

*Mr Yogesh Kulkarni is presently with TATA Auto Comp Systems Limited as
Head, Oracle Applications & IT looking after Oracle applications
implementation in areas of Manufacturing and SCM.*

*Dr. Anil Keskar is currently Director at Sinhgad Technical Education Society's
Sinhgad Business School, Pune. upon his superannuating as Professor and
Head of the Department of Management Sciences, University of Pune
(popularly known as PUMBA).*

*Manasi (Ajotikar) Deshpande is currently HR Executive with Trans Tech
Turnkey Pvt. Ltd. - Pune.*

Abstract

CRM applications as a tool are not widely explored by industries for the Customer Relationship building, this research has looked at issues in enhancing the effectiveness of CRM applications in Industry for building customer relations. Resulting from a variety of catastrophic ERP implementation failures, research on ERP systems implementation need to be done to reduce application complexity. The likelihood of success is related to reduced project scope, complexity, and customization of the application. Defining a reasonable (i.e., smaller) system scope by phasing in software functionality over a series of sequential implementation phases is an important means of decreasing complexity. Similarly, reducing or eliminating customization of the specific functionality of CRM application software is critical to lowering risk. It is the business needs that should determine the CRM application functionality and the scope of functions to be implemented. Firms are finding that implementing CRM functionality beginning with quick, clear-cut and profitable 'hits' helps to insure the initial success, and thus long-term success of a CRM initiative. We suggest that this assessment will provide detailed answers to questions: What is a firm's current awareness of CRM Solutions? And what changes must be adopted before embarking on a successful CRM initiative?

Introduction

Effective Customer Relationship Management strategy requires that an organization provides customer value that is superior to that of the competition. To offer superior delivered value, marketing should directly influence three core business processes: product development management (PDM), supply chain management (SCM) and customer relationship management (CRM). The goal of the CRM process is to create solution that customer need and want. CRM processes comprise the acquisition of physical and informational input and the efficiency and effectiveness of transforming these input into customer solutions. The objective of the CRM process are to shape customer' perception of the organization and its product through identifying customer, creating customer knowledge and building committed customer relationship. An essence, CRM "if a business strategy that attempt to endure every customer interaction (whether for sale or service) if appropriate, relevant, and consistent. CRM if a core business strategy for managing and optimizing all customer interaction across an organization's traditional and electronic interfaces. CRM can be used to gain clearer insight and more intimate understanding of customer' buying behaviour, helping to build an effective competitive advantage. CRM is driven by

three factors: 1) consumers empowered by information, technologies, choice, globalization and deregulation; 2) increased competition; and 3) the Internet and e-business, which facilitate the emergence of new distribution channels and enhance sales and marketing as well as service effectiveness and efficiency. It must be remembered that effective CRM is more than a software solution; it is about how customer information is used to create an ongoing relationship with the customer. To help achieve that outcome, different relationship approaches, and perhaps even different CRM software, might be needed for the different types of customer relationships found in the business-to-business (B2B), business-to-consumer (B2C) or business-to-business-to-consumer (B2B2C) markets. The producer needs information on its customers' territory, business model, product preferences and end customer characteristics. Different markets and customer types often require different kinds of relationships. Different customer wants and expectations may require different customer information and customer contact strategies. Information from these personalized contact points can be linked to statistical and reporting software tools when these data are captured, ideally in real time.

Objectives of the Research

The purpose of this research is :

1. To find if the Autocomponent Industry is really ready to take on the CRM hype in terms of awareness of what the IT solutions have on platter to offer
2. To find factors that will enhance the effective implementation of Business solution in Supply Chain.

Supply chain management is the practice of using the Web and other information technologies to coordinate and keep track of supplies as they move through a business's supply networks. The simultaneous goals of

supply chain management are to quickly meet customer demand, for instance, fulfilling their orders in a timely fashion and offering them accurate projections and to minimise costs by reducing inventories and making supply chains optimally efficient. Taking above objectives in consideration we define the scope as follows:

Scope of Proposed Research

1. To study of Effectiveness of CRM applications in various companies in area of auto components .
2. To probe if Industry is really ready to take on the CRM hype with respect to awareness of what the IT solutions have on platter to offer.
3. To Identify issues in effective use of CRM applications with reference to successful CRM sites.

Review of Literature

The competitive arena today has shifted from price, quality, and promotion to speed and customer service. In response, competitive companies are undertaking the introspective soul-searching necessary to let customers, not marketing or research and development, direct the future. They are putting into place Customer Relationship Management (CRM) strategies that attract the right customers, keep them coming back, and harvest them for quality profits.

Customer Relationship Management is a comprehensive and integrated approach to developing, supporting, and retaining quality customers. CRM software applications are used to view customer interactions and make the information available throughout the company. The most commonly defined components include sales and marketing automation, customer support/call centre, field service, sales force automation, and product configuration. The CRM solution market is projected to grow rapidly over the next few years. (Butler , 2000)

In a well-executed CRM strategy, operations revolve around the customer and involve much more than any one software application. CRM sparks new ways of doing business and affords a clearer insight into customer behaviour. Execution of a CRM strategy brings with it the opportunity to realign and reinvent processes that touch the customer in many ways. Superior implementations merge the so-called front-office and back-office operations. This gives organizations a complete view of their customer relationships, while opening up internal systems so that customers can service and sell themselves. Today many companies use the Supply Chain in different ways to suit their own needs. The basic principals are still the same, gain information and mould it while cutting down on the time it takes to get material and distribute the product to the customer, one of the major tools used today is the Internet. Firms throughout the world use this global communication medium. The biggest importance to companies is keeping them in touch with the doings of other similar companies around the world. Use of the Internet include soliciting potential customers as well as finding out what the competition is doing. This inexpensive form of advertising has become a favourite for marketing directors of all firms. This new medium allows for the connection to previously unreachable markets. Some companies like Amazon Books are a virtual company using the Internet as its headquarters. What Amazon does is sell books, but instead of being located in the local mall their location is Amazon.com on the Internet, this is an example of a true virtual Supply Chain, by reaching customers and suppliers alike with out actually being there. To place an order all that is requires is to gain access to the virtual store and then find what book you are looking for. The book arrives at your door by any number of package carriers, with a savings of 15 % or greater over a local bookstore. The reason prices are so cheap is there are no locations to lease and few employees run a store that services literally millions of customers from

one location (Davids ,1999).

One of the other problems with the Supply Chain is that when first put on the market it promised to reduce the number of workers there by increasing productivity. The problem is that Supply Chain Management has only displaced jobs and no real productivity gains show up in most sectors of the economy. Other hindrances to Supply Chain Management include less face-to-face interaction, this is a problem mostly on a sales side of the business. Companies are now on a Just In Time delivery system that brings their goods to the factories when they are ready to use them. The ordering process for this system uses Supply Chain values. What happens is that a buyer's inventory's records post on the supplier's system. They have a min. max. system in place telling the supplier when to ship the product. This definitely cuts down on the number of people in business who come by to check inventory levels and see if you are ready to place another order. With the new inter-plant communication people see less and less of their co-workers and supervisors. The unprecedented growth of the Internet has made it a mass media, providing an opportunity for commercialization. It is fast becoming a new medium for doing business presenting unlimited challenges and opportunities that are already being tapped by many organizations. It brings value to critical business activities and if properly implemented, it could positively impact the business model by bringing cost efficiency, shorter time to market and so forth.

In order to be competitive in today's global market, organizations need to forge tighter and closer working relationships with their supply chain partners. There is a need to automate processes across all of these partners and ensure that transactions flow quickly and securely between the different partners. Organizations must be able to extend their internal information systems beyond their boundaries and include their partners. The Internet provides the organizations with the opportunity to achieve

this - the opportunity to transcend boundaries, leverage legacy resources and behave like a single virtual enterprise.

As these are the early days of supply chain automation through the internet, there are bound to be challenges. The successful implementation of e-supply chain depends heavily on the ability to break down barriers among business partners all along the supply chain. Only trust and collaboration between the supply chain partners can help achieve this.

Although there are challenges to the implementation of the e-supply chain, the benefits derived from an integrated supply chain will overcome these challenges as companies come to realize the need for real-time information systems and adapt to new business models. As organizations enter a new age of global competitiveness, electronic supply chain would serve as a tremendous catalyst for this new age and aid them in their quest for market share and profitability (Dick, 1994).

It is a strategy used to learn more about customers' needs and behaviours in order to develop stronger relationships with them. After all, good customer relationships are at the heart of business success. There are many technological components to CRM, but thinking about CRM in primarily technological terms is a mistake. The more useful way to think about CRM is as a process that will help bring together lots of pieces of information about customers, sales, marketing effectiveness, responsiveness and market trends. The idea of CRM is that it helps businesses use technology and human resources to gain insight into the behaviour of customers and the value of those customers. Customers feel valued when their names and preferences are known to sales and service representatives; and when they experience personal, respectful and efficient service, their positive opinion of a company is reinforced. The benefits of CRM success extend to all employees when an

organization runs more efficiently and profitably. Some examples: Sales reps are able to spend more time selling and less time entering data. They retrieve and send information more quickly, and they have a consistent method to track and follow up leads. Customer service reps are more confident when they interact with customers and the information they dispense is more consistent and helpful, because the reps have a complete customer profile and history on the screen in front of them. Managers can make informed decisions faster, because they can quickly generate customer reports, profiles and forecasts (Duboff, 2000).

For CRM to be truly effective, an organization must first decide what kind of customer information it is looking for and it must decide what it intends to do with that information. For example, many financial institutions keep track of customers' life stages in order to market appropriate banking products. The organization must look into all of the different ways information about customers comes into a business, where and how this data is stored and how it is currently used. One company, for instance, may interact with customers in a myriad of different ways including mail campaigns, Web sites, brick-and-mortar stores, call centres, mobile sales force staff and marketing and advertising efforts. Solid CRM systems link up each of these points. This collected data flows between operational systems (like sales and inventory systems) and analytical systems that can help sort through these records for patterns. Company analysts can then comb through the data to obtain a holistic view of each customer and pinpoint areas where better services are needed. For example, if someone has a mortgage, a business loan, an IRA and a large commercial checking account with one bank. CRM itself is not a technology, even though technology is required to enable CRM, technology makes it possible to integrate the large volumes of customer information that are required for CRM, and to efficiently transform this information into useful knowledge. Technology also enables a company to

interact with its customers in ways that provide value to the customer, as well as makes it easier for the customer to do business with them. However, leveraging this customer knowledge to make better business decisions and to be responsive to customers remains the responsibility of individual managers and workers at all levels within the company.

Achieving the one-to-one future is possible for e-businesses. It first requires developing and perfecting profiles of customers. The analogy is provided of the friendly shopkeeper, who, before mass marketing, knew his customers by their habits and lifestyles not just their demographics. Customers must feel that they can trust a company. Companies can build trust by offering higher standards of privacy (Fournier, 1998).

Problem Formulation

We arrived at research gap with detail literature review. The initial pilot study conducted by the author has shown some interesting facts like lot of industries lack awareness about the CRM functionalities available in the packaged softwares. Also few places where deployed its still not used effectively that can in turn deliver an efficient IT enabled supply chain.

There is a considerable lack of awareness about CRM applications in the Customer relationship area. There is lack of understanding from customers as well as the packaged solution implementers like SAP or Oracle. This research will throw a light on requirement of increasing awareness of packaged solutions to effective use of business solutions to increase use of efficiency of Supply Chain. The possible solution to more use of CRM applications is customized approach in functionality offerings to cater the industry specific needs. Interestingly, in today's world where customer is king, the IT enablement of Customer relationship is restricted to few areas like BPO, Banks and

the whole area of industrial marketing is untouched. If needs of these segments are properly analyzed and catered to there is huge potential to improve the effectiveness of supply chain & customer service of these industries. The IT enablement of areas like the auto, auto component industries can change the way these industry segments work today. For e.g. a customer choosing a customized car on net or a OEM like TATA Motors logging an online complaint and getting immediate response from a supplier like Yazaki on resolution can change the whole supply chain offerings. This will result in faster response and higher customer satisfaction with his needs getting addressed. Today we get a pleasant surprise when a credit card company knows about our choices of shopping, travel destinations when they offer attractive schemes. Similarly how about TATA motors offering us some good discounts on choosing a second car as Indigo or a Safari after buying first indica.

This IT enablement is next competitive advantage industry segments like auto, auto components will have to embark on after getting exhausted on cost cutting efforts and waging price wars against each other.

The above discussion brings the key Problems before the industry:

1. Why were companies struggling to serve customer even after implementing CRM?
(Issue of IT awareness)
2. Why were some companies struggling with CRM solutions? What is that needs to be done differently in terms of integrated data flow across supply chain?
(Effective Implementation)
3. What is a better option of implementing CRM? (Study implementation framework)

We defined hypothesis based on above problem as

Step # 1: Hypothesis

Null Hypothesis:

CRM applications are effective in increasing the Efficiency of Supply Chain with special reference to Autocomponent Industries.

Alternative Hypothesis:

CRM applications are not effective in increasing the Efficiency of Supply Chain with special reference to Autocomponent Industries.

Research Design

The present research tries find the relation between various performance parameters and their effectiveness in enhancing the supply chain. Hence the method that was selected for this study was based on qualitative as well as quantitative methods. Basically, the quantitative approach pursues facts and is employed when researchers desire to acquire statistical truth. We used survey method to collect data because survey research is the method of gathering data from respondents thought to be representative of some population, using an instrument composed of closed structure or open-ended items (questions). It is one of the most dominant forms of data collection in the social sciences, providing for efficient collection of data over broad populations, amenable to self-administration, administration in person, by telephone, via mail and over the Internet.

Method of Study and Data collection:

Present study took a sample of about 33 companies to assess the awareness of CRM applications in Industry. About 20 questions were asked to assess following parameters

1. **Effective Response to customer queries.**

This parameter was used to give insights into effectively using CRM Business Solution to answer customer queries as well as issues.

2. **Online Order Booking.**

This parameter was used to effectiveness of the net based technology to interactively guide the customer to book orders online.

3. **Near accurate response to Customer requirement in terms of delivery and service.**

This parameter was used to judge the application of Business solution to respond to customer needs of on time delivery and prompt service.

4. **Flow of customer requirement across the supply chain /Service.**

This was used to judge the information flow of customer preference and requirements across the supply chain unto the end supplier.

5. **Customer feedback and Information across the supply Chain /Service.**

This refers the last part of customer feedback and action taken to address the same in all future engagements.

The study was restricted to autocomponents industries in and around Pune. Pune is considered as Detroit of India considering the massive concentration of Auto manufacturers and autocomponent Industries.

Testing of Hypothesis and Data Analysis:

Step # 1: Hypothesis

Null Hypothesis:

CRM applications are effective in increasing the Efficiency of Supply Chain with special reference to Autocomponent Industries.

Alternative Hypothesis:

CRM applications are not effective in increasing the Efficiency of Supply Chain with special reference to Autocomponent Industries. We chose T test for testing the hypothesis. The next step was calculation of Test statistic.

Step # 2: Calculate Test Statistic

Calculation of the test statistic requires four components:

1. The average of the sample (observed average)
2. The population average or other known value (expected average)
3. The standard deviation of the average

4. The number of observations.

With these fourpieces of information, we calculated the following statistic, t:

Step # 3: Use This Value to Determine P-Value

Having calculated the t-statistic; compare the t-value with a standard table of t-values to determine whether the t-statistic reaches the threshold of statistical significance.

The Result Set is as Follows:

Table 1 Questionnaire for analysing effectiveness of Business solutions.

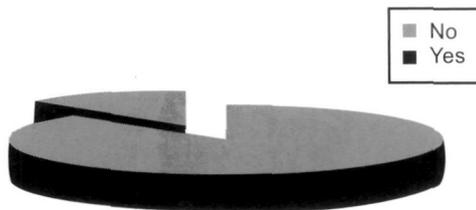
Questions	Observed	Expected	No. of Observations
Are you able to give satisfactory answers regarding the product or service availability using the CRM application?	45	330	33
Do you often cross check with other applications to confirm data in your CRM application?	35	330	33
Does your IT dept. get complaints of data mismatch or interface failures for the customer data?	295	330	33
Do you get complains from customer for the inaccuracy of the information provided by you like wrong inventory, service or accounts payable etc.	35	330	33
What is percentage of Online orders booked?	25	330	33
For Online orders booked, does your supply chain dept. get accurate information regarding the product, service & required delivery dates?	40	330	33
Do you often call your customer to confirm the order details once you receive an online order?	160	330	33
Is the customer interface for online ordering user friendly?	40	330	33
Do you often get complaints regarding the application for online ordering?	0	330	33
Are you able to give accurate delivery date or service response time using the CRM application?	40	330	33

Sample Data Collection/Analysis

(Reference Findings of detail Survey Questionnaire based on assessment of 33 companies)

Count of Name of the companies	Answers 6		Grand Total
	No	Yes	
Total	29	4	33
Name of Companies	No	Yes	Grand Total
Total	29	4	33

For Online orders booked, does your supply chain dept. get accurate information regarding the product, service & required delivery dates ?



Having calculated the t-statistic; compare the t-value with a standard table of t-values to determine whether the t-statistic reaches the threshold of statistical significance.

Plugging in the values of t (2.925) and n (number of cases) = 33 Yields a p-value of .0031. We require p-values of .05 or less in order to reject the null hypothesis. With a value of .0031 is less than .05 hence we reject the null hypothesis as there is only .31 % probability of CRM applications are effective in increasing the Efficiency of Supply Chain with special reference to Autocomponent Industries.

Therefore, we accept alternate hypothesis CRM applications are not effective in increasing the Efficiency of Supply Chain with special reference to Autocomponent Industries.

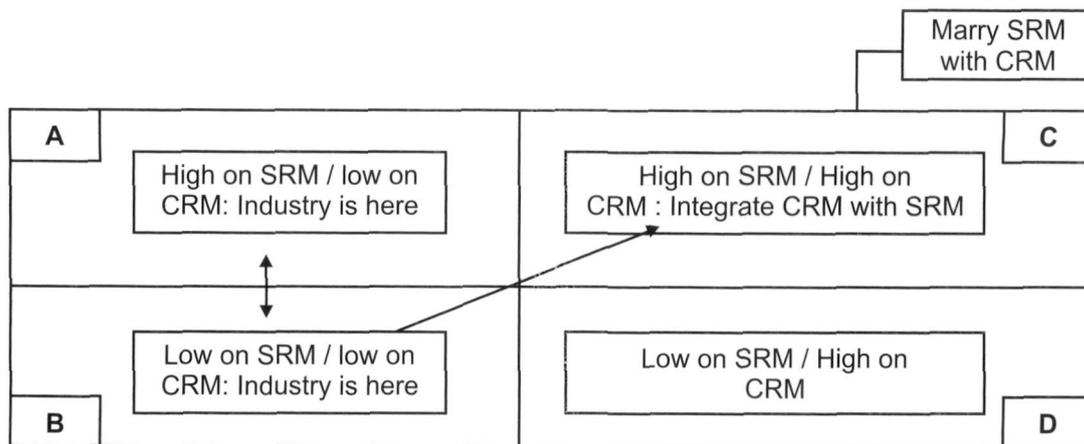
Conclusions of research are:

- CRM as application will need more Business education to start effective utilization of these packages.
- Very few companies have the basic awareness of CRM Packages.
- Lack of user friendliness and more focus on SCM solutions seems to be the reason for lack of this readiness.
- The key to success for CRM Applications lies in increasing awareness about business about the advantages of these applications .

9. Contribution to Knowledge :

We have suggested new framework. Our literature survey clearly pointed out that more research with regard to the basic awareness and implementation phase may be required. We have proposed a new framework to take full benefit of CRM applications. To take full benefit of CRM applications we have suggested following framework. (Refer: Proposed CRM Vs SRM Quadrant). Most of companies are in early stages of implementing Supplier Relationship Management in quadrant A and B. There are negligible companies which are better off on CRM initiatives as compared to the ERP and SRM implementations. Few companies are in quadrant C that is good initiatives in CRM and SRM areas. Companies should move from quadrant B to quadrant C.

Ideally to take full benefit of CRM and SRM, both should be integrated. Real value of investment in packaged implementation will not come if we do not integrate SRM with CRM.



CRM Vs SRM Quadrant- Fig1

Analysis using the new framework:

- We have analyzed the organizations with new framework to find issues with present implementations.
- Most of companies are in early stages of implementing Supplier Relationship Management in quadrant A and B.
- There are negligible companies which are better off on CRM initiatives as compared to the ERP and SRM implementations.
- Few companies are in quadrant C that is good initiatives in CRM and SRM areas.
- Ideally to take full benefit of CRM and SRM, both should be integrated. Real value of investment in packaged implementation will not come if we don't. Marry CRM with SRM.

References:

- Butler, S. "Changing the Game: CRM and the e-World," *Journal of Business Strategy*, 21 (March/April), 2000, 13-14.
- BPR & Organizational Culture. (2007) Harper Business Publication, New York, Chap. 141: 567.
- David, S.M, Do ES Packages Drive Convergence? *MIT Sloan Review*, Summer Volume 44, Number 4, pp. 7, 2003.
- Davids, M. "How to Avoid the 10 Biggest Mistakes a CRM," *The Journal of Business Strategy*, 20 (November/December), 1999, 22-26.
- Dick, A. S. and K. Basu. "Customer Loyalty," *Journal of the Academy of Marketing Science*, (spring), 1994.
- Duboff, R. and J. Spaeth. "Researching the Future Internet," *Direct Marketing*, 60 (July), 2000, 42-54.
- Fournier, S. "Consumers and Their Brands," *Journal of Consumer Research*, (March), 1998, 355.
- Fein, A. D. (2002). *Surviving the Shakeout: where B2B Exchanges went Wrong: 1-2, 2002.*
Available from:
ps.wharton.upenn.edu/people/faculty/day.html

