

Impact of E-CRM on customer satisfaction and loyalty: A systematic review of critical success factors for effective E-CRM

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Abstract-Background: Electronic Customer Relationship Management (E-CRM) is an emerging innovative practice arose from the traditional Customer Relationship Management (CRM) where in internet based applications and technologies are likely used to retain the customers who act as the assets of business. It is essentially the adaptation of CRM applied in the e-commerce environment which helps to build and maintain the customers meeting their desires so as to retain the organization's customers. ECRM acts as a platform connecting the business organization and its clients sustaining the customer relationship.

Objectives: The purpose of the research paper is to study the impact of E-CRM on customer satisfaction and loyalty. For this the study seeks a systematic review method to analyze the success factors for effective CRM.

Methods: The data is collected after a long procedure of screening. Around 80 papers were selected and later screened base on the inclusion /exclusion criteria discussed in the study. Keeping in mind the objectives of the study, screening is done on the basis of title, abstract and content of the papers. After the screening is done, 13 papers were assessed in detail of which none is excluded.

Results: The study identified customer loyalty, customer satisfaction, customer retention, and customer attraction as the critical factors affecting the ECRM. It is found that there is a positive, healthy relationship between ECRM, loyalty, satisfaction, retention and attraction.

Conclusion: The study concludes that ECRM will be constantly growing with the advent of more technologies, applications and internet. It is also concluded that ECRM will never see a decline in this fast growing technological era.

I. INTRODUCTION

1.1 Background of the Study

Customer Relationship Management is a discipline which centers on building a meaningful relationship with the customers. It is a design to improve the customer satisfaction enhancing the understanding capacity of the organizations. Monitoring and recording the experiences of the customers

helps the organizations to improve corporate performance. It is identified that the best way to develop, strengthen and maintain the customer relationship is sticking strictly on to CRM. CRM is a business strategy of reducing the costs and increasing the profit and building a healthy relationship with the customers. In terms of Information Technology, CRM is described as a software application which automates the selling, marketing and service functions of the business (Buttle, 2009).

CRM is a disciplined approach of maintaining and developing customer relationships. Buttle (2009) defined Customer Relationship Management as a 'core business strategy that aims to create and deliver value to targeted customers at a point. It integrates internal process and functions and external networks'. In other words CRM is a technology enabled approach to manage the customer interface. Naveen (2014), a research scholar in the research identified the major objectives of CRM which include: gathering a better understanding of the customers i.e., the needs and desires of the customers to be known well before; defining the appropriate service and the products matching the unique needs of the customers; enable the company to quickly identify, attract and acquire the new customers. The study concludes that CRM is the essential element acting as a key for the success of all the industries. Maintaining a healthy and harmonious relationship with the customers is the only way to run the business successful. The study clearly states that CRM must be employed and implemented in all the sectors and the organizations are bound to maintain a good relation with their customers (Naveen & Venkataraman, 2014).

According to Letihen (2007), CRM aims at development of the marketing which is one-to-one marketing focusing and aiming at the individual customers. While to Peelen (2005), CRM is a business strategy aimed towards developing long term mutually profitable, individual customer-supplier relationships and is placed on an IT infrastructure to be developed, one that enables well-defined and controlled processes, and places capable personnel in a position to function optimally. According to Heczková & Stoklasa (2010) the definitions of CRM have become more tangible and sizeable strategic management. The study found out that CRM

is a source of competitive advantage which focuses on establishing long-term relationship with the customers. It is also marked that definitions of CRM is gradually changed overtime.

1.2 Critical Success Factors for Effective CRM

Daniel in the early 1960s recognised the idea of Critical Success Factors (CSF) although little attention was paid then. CSF is defined by Rockart as the limited number of areas in which if the results are satisfactory it directly shows an impact on the competitive component of the organization (Sanad, Fidler & McBride, 2010). According to Ngai, CSF is critical aspects and apparently should be given complete attention to achieve success. While, in the situation, culture and the activity should be taken into consideration in examining the critical success factors. The study by Sanad, Fidler & McBride (2010) suggest that CSF's are interpretive, dynamic and interlinked. Many studies conducted in the field of CSF have come up with different opinions and classification of sub-categories.

In the process of CRM implementation, nine critical success factors were identified by King and Burgess (2008), which are: willingness to share data, willing to change processes, knowledge management capabilities, technological readiness, top management support, culture change capability, process change capability, systems integration capability and communication of CRM strategy. Mehta (2013) in the research paper has identified a list of critical success factors in the implementation of CRM of which given below are a few included in the CSF's: Customer data collection, Customer information quality, Customer satisfaction, Address culture change, Defining vision and objectives, Employee behavior/attitude, Organizational culture, Customer-centric organization, CRM goals/objectives, CRM process, CRM capabilities employees, Performance measures and Staff commitment.

1.3 Impact of E-CRM on the factors of loyalty and customer satisfaction

Electronic Customer Relation Management is the implementation of internet based technology or E-technology to attain, retain and sustain the customers and also to maintain the customer relationship. In the E-CRM, digital media is used to reach the customers in collecting their information, meeting needs and desires. The technologies or internet applications used to gather the information are operational databases, social media marketing, Emails, customer service and web messages. When CRM uses fax, phone and retail store to reach out the customers E-CRM uses wireless technology, internet and emails. E-CRM deals with the customer needs and CRM deals with the products. Speaking of another advantage of E-CRM is it is cheap unlike CRM, which is expensive.

Particularly focusing on the factors of loyalty and customer satisfaction in E-CRM, many studies argue that technology without any doubt has improved the customer satisfaction, retention and the loyalty of the customers. In a recent study conducted by Behravan and Rahman (2012), it is observed that technology plays a high role in maintaining the loyalty, retention and customer satisfaction. The technology made it easier to maintain an efficient customer relationship which also affects the loyalty and customer satisfaction of the customers. Another study on E-CRM focusing on the online mobile customers examined the effect of E-CRM on loyalty which turned out to be positive. The E-CRM customers exhibited the feature of loyalty in the E-CRM purchase (Al haiou al, 2011).

Ismail and Hussain (2013) added the variable of trust which exerts influence on loyalty and customer satisfaction. Another study after the detailed examination of E-CRM arrived at the conclusion that E-CRM is gaining customer loyalty and customer satisfaction in modern marketing. Apart from that, the study suggests the managers to adopt E-CRM in the industry to expand the customer loyalty and customer satisfaction. The study also supports the previous reviewed literature stating that E-CRM has a significant determination on customer satisfaction and customer loyalty. Another major finding of the study is that ambience and computer anxiety can either strengthen or weaken the relationship among E-CRM, customer loyalty and customer satisfaction (Nikou, Selamat & Yusoff, 2016).

1.4 E-CRM and its functioning

E-CRM has reached its peak over the period of time which and now all the business marketers are in the run of achieving success. Primary focus of E-CRM is channeled towards the internet and technology enabling the electronic customer relationship management at an ease. Hashing over the concept of E-CRM states that retaining the customers through the process of constant interaction becomes the access point. Certainly, E-CRM functioning is more or less different to CRM. In the case of customer contacts, E-CRM is a mixture of traditional and modern technologies like phone, emails, internet, wireless technologies and faxes. Regarding the maintenance, CRM is expensive and at the same time implementation process requires additional time. While E-CRM is cheap and implementation can be done at anytime, anywhere boundary-less. The needs of the customers are taken into consideration within the functioning of E-CRM unlike in the CRM. In addition to, E-CRM works at different levels-foundational services, customer-centred services and value-added services (Deshmukh, Deepa and Shravanthi, 2013).

II. METHODOLOGY

The data for the study is collected from various online sites like Research gate, Science direct, Journals of Management Research, Elsevier, Semantic Scholar, Journal of Business Trends, Academia and CV Library. All these search engines were used to gather the information and literature relevant to the current study. While gathering the information, the keywords employed in the search engine include ‘Electronic Customer Relationship Management, Customer Relationship Management, Critical Success Factors, functioning of E-CRM, differences between CRM and E-CRM, customer loyalty and customer satisfaction, relationship between E-CRM, customer loyalty and satisfaction and customer retention’. A systematic review of the literature is adopted in the study to analyse the study in a detailed manner. As a part of preparing a systematic review, nearly 70 papers were retrieved from the database search engines, and 10 papers were selected from other sources. Through a rigorous process of screening, in the end, 13 papers were selected for the assessment under the inclusion/exclusion category. A PRISMA flow chart is employed for the systematic analysis of the papers selected for assessment.

A. Inclusion Category

The papers chosen for the current study is based on the following inclusion category:

- 1) Studies focusing on the Electronic Customer Relationship Management.
- 2) Papers reviewing the critical success factors of CRM and ECRM.
- 3) Papers examining the relationship between ECRM, customer loyalty and customer satisfaction.

B. 2.2 Exclusion Category

Screening of the papers is made on the basis of following exclusion category:

- 1) Papers focusing on CRM alone.
- 2) Studies comparing the Electronic Customer Relationship Management an Electronic Customer Relationship Marketing.
- 3) Title and abstract of the papers apt for the study will be included and other excluded.
- 4) Papers reviewed before 2000 is excluded.

Fig.1: PRISMA flowchart

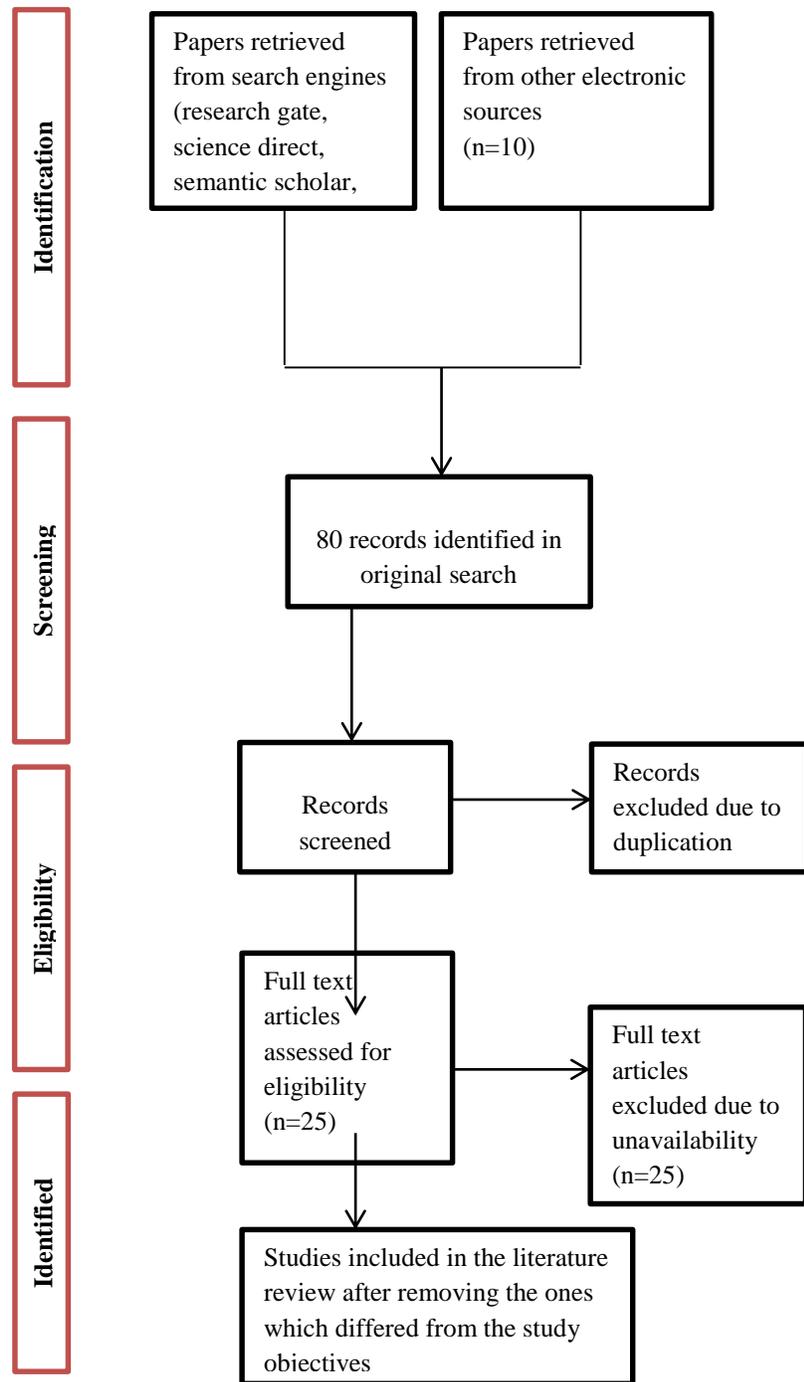


Table .1: Studies included in the literature review

Author	Design of the study	Population of the study	Results
Qimei Chen & Hong Mei Chen (2004)	Qualitative and Quantitative exploratory study	An empirical survey is designed to conduct across 180 companies along with an exploratory in-depth interview of 36 firms. The study used quantitative and qualitative methods to achieve triangulation of ideas and insights. Audio tapes were transcribed to files so as to derive results.	The study found out that critical success factors of E-CRM from the manager's point-of-view. The interviews held with the managers exposed the rich set of critical success factors like first class leadership, organizational perceived usefulness, knowledge management, business-IT alignment, system integration, and culture/structure change. The study includes the table of these six dimensions explaining in detail.
Hee-Woong Kim, Gil-Hyung Lee & Shan-Ling Pan (2002)	Qualitative exploratory study	The study selected four case studies of both CRM and E-CRM systems in the service industry. The case studies included success and failures systems of electronic customer relation management and their profiles are recorded in a tabular form. Organizations and their subunits were analysed in the study to derive the results in favour to the research. Executives, E-CRM project managers, project members and system users of CRM and E-CRM are interviewed to obtain retrospective data. The study focuses on only two success case studies.	The exploratory study design implemented helped in understanding the relationship between the implementation factors and the success of CRM/E-CRM systems. A diagrammatic representation of the factors leading towards the success of E-CRM is represented in the study. The critical success factors identified include high user satisfaction, high system quality, integrated source systems, integrated channels and database systems, and adequate system designs. This research builds an interrelation with CRM and ECRM factors.
Mohamed Khalifa & Ning Shen (2005)	Longitudinal quantitative study	The study choose forty online shoppers randomly from the internet retailer of computer hardware. Further they are divided	The study has found out the dimensions affecting the electronic customer relationship management as online customer

		<p>into four groups ten each. In this process the individuals are asked to analyse the important constituents of ECRM that influenced the customer satisfaction with e-based shopping strategy. The study was validated with the card sorting procedure suggested by Moore and Benbasat. And the items were measured in a 7-point Likert scale.</p>	<p>satisfaction. The sub dimensions identified are attraction, pre purchase ECRM, at purchase ECRM and post purchase ECRM. Customer education is identified as the important variable in the pre purchase phase of ECRM. Online customer satisfaction is observed in two phases -attraction and retention in the study. The study also identified other drivers of customer satisfaction of ECRM as alerts, search capabilities, order tracking and problem solving. Another significant variable of online community is identified in the study.</p>
<p>Paul Harrigan, Elaine Ramsey & Patrick Ibbotson (2009)</p>	<p>Qualitative exploratory study</p>	<p>In order to conduct the study a sample of 1445 small and medium sized enterprises from the island of Ireland was selected. A survey questionnaire instrument is employed in the study to obtain data. The questionnaire was distributed online. Out of 1445 sample, 286 responses were received.</p>	<p>The studies findings are recorded as ECRM increases the external and internal efficiency and effectiveness of small and medium sized enterprises. The other significant benefits noted in the study is that ECRM is enhancing the customer service sales and opening of the international markets, improving the profits and generating cost savings in the market. There is also a considerable positive impact on customer loyalty.</p>
<p>Mingruedee Mettagarunagul & Pensiri Puengprakiet (2011)</p>	<p>Deductive qualitative approach study</p>	<p>Both primary and secondary ways of gathering the data is adopted in the study. For collecting the primary data, interviews from a few employees of the chosen company was conducted. And for the secondary data, the study looked in to the databases. Thus, in both ways data is gathered for the further experimentation. The primary data explored the benefits of ECRM. Semi-</p>	<p>The study suggests the ways in which an organization can improve their ECRM to enhance their customer relationship. Operating the networks smoothly is suggested as a way to improve customer relationship in the organizations. Having a good knowledge of the customers, organization strategy, ECRM system, ECRM network or the operation of IT facilities</p>

		structured interviews were employed in the interview. While the secondary data is collected from the articles, journals, books or previous researches on the topic ECRM.	are good means to persuade employees' capabilities and enhance their outcome.
Nor Azila and Mohd Noor (2011)	Qualitative and quantitative study	University students belonging to a specific population is chosen as the sample for the study. The reasons for choosing students as samples is discussed in the paper where one of the reasons being they are the most users of internet. Data was collected in the form of questionnaires, where 850 of them were distributed. Out of this 667 were returned from which 95 of them got excluded, 84 of them were incomplete. Finally, 448 responses are recorded in the study. A regression analysis is also conducted to find out the relationship between ECRM performance and customer loyalty.	The results point out that there is a positive correlation between e-CRM performance and customer loyalty. It is also found that ECRM is a success in the electronic commerce and that it directly improves the relationship between ECRM and customer loyalty. In addition to, the study also found out those e-satisfaction increases the customer loyalty. The result of this research still supports the theoretical relationship between ECRM performance and customer loyalty. Managers should focus on encouraging employees to build customer relationship by giving them the opportunity to solve customer problems was another suggestion put forward in the study.
B. Kheyri, M. Mardi & Z. Mahzoon (2012)	Quantitative study	With the help of questionnaires the study collected the data from different sources. The questionnaire had 65 questions which assess the research hypothesis discussed in the research paper. Stratified random sampling procedure is adopted to select and finalise the samples. The sample size covered 309 people where most of them were selected from the customers. After the sampling, description and analytical inductive method method is employed to produce the results.	Analysis of the questionnaires showcases that females exhibit a more positive attitude towards ECRM implementation than males. Hence, the study found that ECRM implementation will promise an increase impact on customer loyalty and customer satisfaction. The study found out that relationship between e-CRM technology system and organizational success proved to be less strong than other e-CRM implementation factors.

Zaman Ali, Ishaku Ishaya & Haslinda Hassan (2015)	Quantitative sectional study cross	For this particular study, small and medium sized enterprises are chosen as respondents. The reason for choosing SMEs is that they are facing numerous challenges in the implementation of ECRM. As a part of this, questionnaires were distributed to the SME managers as they know best of the organizations. The study also reviewed the existing literature for further analysis.	The aim of the study being finding out the critical factors of ECRM implementation, it is found out the operational and strategic benefits, top management support, technological readiness, and knowledge management capabilities are covered in the successful implementation of ECRM.
Thuy Van Nguyen & Cuong Hung Pham (2015)	Quantitative and qualitative study	The study has 61 indicators derived using factor analysis. Thus, the average sample size of the study is 305 observations. The study also has 10 independent variables which approximately is equal to 130 observations. Out of all these observations, 308 observations are taken for the data analysis. Cronbach Alpha reliability coefficients measurement scale is used to evaluate and analyse the data.	The research result shows that the factors affect successful ECRM implementation in commercial banks including ECRM strategy, Top management commitment, IT infrastructure, consulting team to implement the project, the project team ECRM, banking culture, data quality according to the hypothesis posed. The result of analysis of research data also shows successful ECRM implementation will impact on effectiveness of customer relationship at commercial banks. Even the management strategies of ECRM, Top management commitment, implementation consultants, project team of the bank, technology infrastructure, data quality strongly influence the success of ECRM deployment at commercial banks.
Muhammad Bashir Khan and Kausar Fiaz Khawaja (2013)	Qualitative study	The target population of the study was the mobile users. Around 300 questionnaires were distributed to the sample and in total 6 public and private organizations was selected where the	The study found out that the impact of ECRM on customer loyalty grows stronger due to the mediating role of customer satisfaction. Customer satisfaction increases with the use of ECRM which

		respondents were employees. Random sampling technique was used in the study. From 300 about 275 questionnaires were received, out of which 250 were selected for study. Among 250 respondents 120 were female and 130 were male.	further builds customer loyalty. The anxiety variable moderates between ECRM and customer satisfaction the study identifies.
Gurmeet Singh Saini and Sushil kumar (2015)	Qualitative and quantitative study	To collect the information the study targeted 170 respondents out of which 150 were considered valid. The majority of respondents are from 21 to 30 age group. The study used questionnaire with the help of 5 point Likert scale ranging from strongly agree to strongly disagree. Descriptive analysis was used to present the demographic profile of the respondents. Correlation analysis was used to measure the correlation between the variables	The study found out the results as follows: there is a considerable relationship between convenience and consumers satisfaction toward online shopping; there is significant relationship between personalized offers made by retailers and consumers satisfaction toward online shopping; there is significant relationship between security and consumers satisfaction toward online shopping and there is significant relationship between trust and consumers satisfaction toward online shopping.
Mang'unyi, Kabbalah & Timothy	Cross-sectional quantitative study	The target population of the study included all the customers of Standard Chartered Bank residing in the capital city of Kenya. After the discussion, the sample size was fixed to not more than 60. The questionnaires were distributed in the ATM lobby and banking hall. And the final sample included 78 as the customers responded positively.	This study also found out that there is a significant positive relationship between ECRM and customer loyalty. In this study, the customer loyalty is largely dependent on the pre-service and during-service transactional features.

customer satisfaction. Customer loyalty is found to be largely dependent on the pre-service and during service features. Some other researchers hold the opinion that the element of trust is related to customer's satisfaction in any area. Convenience also plays a major role in building the healthy relationship towards customer satisfaction. Even the personalized offers also satisfy the customers to a large extent. It can also be noted that customer satisfaction increases the

III. FINDINGS AND DISCUSSION

The studies reviewed in the above section substantiate the views that there is a positive relationship between electronic customer relationship management and customer loyalty and

ECRM implementation which indirectly increases customer loyalty. It is understood from the review literature that there are rich critical success factors in the implementation of ECRM. Even in the field of electronic commerce, ECRM has incredible positive impact. A few other studies suggest the factors that helped the successful implementation of the ECRM. Almost all the researchers have focused on the implementation of ECRM, its critical successful factors, relationship either between ECRM, customer Satisfaction or customer loyalty. Until now, no research discusses the impact of customer loyalty and customer satisfaction on ECRM. This will be the gap highlighted in the study. Moreover a systematic review of the impact of these factors is examined in this particular study which can be highlighted.

3.1 ECRM

ECRM is considered to be emerging as a business activity wherein the effective participation of the customers is keen. Retaining the customers, attracting their attention also counts in this competitive era. The main aim of ECRM will be the customers preference unlike in CRM. Since the customers being pivotal, it has become mandatory to gain the trust and loyalty of the customers which would affect the customer satisfaction. The research papers examined in the current study provide enough evidence on the the impact of customer loyalty and customer satisfaction in the implementation of ECRM. CRM, the traditional way of managing the customer relationships is undoubtedly bound to produce an effective strategy like ECRM. Thus, it can be argued that, ECRM is an adaptation of the indigenous way of presenting CRM with the help of technology so as to reach the customers in this modern era.

3.2 Customer Satisfaction and Loyalty

Customer satisfaction and loyalty being the two vital factors determining the relevance of ECRM is reviewed in the study. It is understood that these factors increase the opportunity of implementing ECRM in the fields of banking, shopping or any organization. Convenience, trust, personalized behaviors, is marked as a few factors which affect customer loyalty and satisfaction in ECRM. And it is also observed that females take more interest in the ECRM when compared to the males. Providing appropriate information on the products, services, accurate information, in depth knowledge of goods, services or products with the help of internet, technology, web services, wireless services surely exert a positive influence on customer loyalty and satisfaction.

3.3 Critical Success Factors for effective ECRM

The papers reviewed in the study list out the critical success factors for the effective functioning of ECRM. Some of the CSF include ECRM strategy, Top management commitment, IT infrastructure, consulting team to implement the project, the project team ECRM, banking culture and data quality. A few other studies suggest having a good knowledge of the customers, organization strategy, ECRM system, ECRM

network or the operation of IT facilities are good means to persuade employees' capabilities and enhance their outcome. An effective ECRM can also focus on attracting the customers pre-service, during-service and post-service. This will certainly strengthen the retaining capacity of the customers which would be beneficial to the organization as well. The current study focuses on the critical factors like loyalty, trust, satisfaction, retention and attraction which would exert an influence on ECRM. The conceptual framework covers the above revealed factors affecting ECRM.

IV. CONCLUSION

The study concludes that customer loyalty, customer satisfaction, customer retention and customer attraction increases the business activity in the modern markets. The concept of ECRM will be an emerging trend until and unless there is a devoid of customers, internet and technology. Living in the 21 century, human beings are highly attracted to the technology as the reach is in the tip of the hands. Convenient lifestyle of the era will keep ECRM alive even in the future. The study identifies customer loyalty, satisfaction, retention and attraction to be a few other critical success factors in the implementation of ECRM.

This research is conducted to analyze and understand the role of ECRM in building a strong relation with the customers. It is also understood that customers play a vital role in keeping any market or business alive. ECRM provides a good platform to reach out your targeted customers, knowing more about their needs, desires and end up meeting them. The scope of the study is that as long the4 the customers are alive, any business will tend to grow. Thus, this research will help in understanding the customers more, their priorities as the time progresses and stretch out new dimensions in order to keep ECRM lively.

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