

## The Relationship of E-CRM, Customer Satisfaction and Customer Loyalty. The Moderating Role of Anxiety

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**Abstract:** The rationale behind conducting this study is to evaluate the impact of E-CRM (*used by customer relationship officer and web portal*) on customer satisfaction that further helps in building customer loyalty. Moreover anxiety is taken as a moderating variable that moderates the relationship between E-CRM and customer satisfaction. For this 300 questionnaires were distributed out of which 250 usable responses were obtained. Statistical tests were conducted to evaluate the links. The results depicted that ECRM poses a positive relationship towards customer satisfaction that further helps in building customer loyalty. The future research should comprise of factors that can be used to evaluate the customer satisfaction. In addition the moderating impact of other dispositional variables should be used to evaluate customer satisfaction.

**Key words:** E-CRM, • Customer Satisfaction • Customer Loyalty • Anxiety • Mobile Companies

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### INTRODUCTION

Customer relationship marketing is a technique through which companies can obtain information about its best customers (existing and potential), their needs and demands and get the most out of them by satisfying and retaining them. Basically CRM is based on the business philosophy that customers are the core of a business and a company's success depends on how effectively they manage their relationships with their customers. [1, 2]. Anton 1996 and Anton & Hoeck, 2002 defined CRM as "a comprehensive business and marketing strategy that integrate technology, a process and all business activities around the customer".

Nowadays Organizations implement customer relationship management through information system i.e. electronic customer relationship management (E-CRM). Basically with the help E-CRM organization can take major decisions by involving customers [3] and through internet one to one relationship of a company with each customer is possible [4]. In addition researchers reported that E-CRM is a concatenation of internet marketing and customer based strategies [5].

There are mainly two types of E-CRM: Operational E-CRM and analytical E-CRM [6]. Researcher reported Operational E-CRM as a "front-office" E-CRM i.e.

customers are in direct contact with the company. It can also be referred as customer "touchpoints" that includes both inbound and outbound contacts e.g. telephone call, email, sale representative, customer service centers, SMS, fax, website etc. On the contrary Analytical E-CRM also referred as "back-office" or "strategic" CRM, is based on analytical techniques that can be applied on customer data available in the system or obtained through external source. It helps companies understand customer buying patterns on the basis of their behavior, demographics and past experience with the company.

One of the reasons why companies invest on E-CRM is that, it improves customer loyalty and subsequently helps in retaining customers by increasing customer satisfaction [7]. In 2001 Apicella reported that although E-CRM has a positive impact on customer satisfaction, but still some E-CRM projects fail to meet the required goals. This failure of E-CRM can be due to the lack of considering business process and implementing such features that in reality fail to observe customer satisfaction [8, 9] or it can be due to the fear an individual has towards the technology.

**Research Question:** Due to the busy routine and over burdened schedule, the personal interactions among the individuals are decreasing. They remain in contact with

each other through technology such as online communities, telephones, FAX, EMAILS and cell phones. In such a situation mobile phones plays an important role, as it is easy to carry and helps in giving an instant response due to its advancement. Therefore keeping in view the increase in its use, it is important to evaluate the service provided by the mobile companies to their customer. So the Research Question for this paper is:

- Does ECRM helps in determining the customer satisfaction and customer loyalty?
- Does anxiety moderates the relationship between ECRM and customer satisfaction.

**Literature Review:** In past companies have invested heavily on products and their business strategies were based on products designing, pricing, distribution, but currently marketing strategies of the companies made a rapid shift and businesses focuses on customers. Nowadays companies are investing heavily on technology to retain their customers, considering that today customers are more knowledgeable, well informed of the competitors and need in time response. In reference to this Customer relationship management has emerged as a source for employing relationship marketing within companies and with customers [10].

Since last 40 years a dramatic change has been observed in conducting business. Now due to the internet the shift from traditional business to electronic business has been observed, where dealings are based on electronic mails (e-mail), Information systems and World Wide Web (www). Hence most of entrepreneurial activities, business programs and services are based on Information technology. But beside from considering technology as a source of revenue generating tool, still a little empirical research has been conducted in investigating factors responsible for determining customer satisfaction and loyalty. [11] reported that "As Organizations become increasingly customer focused and driven by customer demands; the need to meet customers' expectation and retain their loyalty becomes more critical". Similarly an article published in [12] pinpoints that "almost 2-3<sup>rd</sup> of British companies [e-business] have learnt nothing about their customers' preferences and behavior online" and that "the future of E-CRM is being seriously undermined because of this ignorance".

Basically in [13] defined E-CRM as "the marketing activities, tools and techniques delivered via the internet which includes emails, www, chat rooms,

e-forums etc., with an aim to locate, build and improve long term customer relationship to enhance their individual potential." In addition E-CRM also utilizes other e-technologies which include mobile telephony, customer call and contact centers and voice response systems.

**Mediating Role of Customer Satisfaction:** Researcher defined satisfaction as a motivation that consumers get from product and service [14]. It is based on customers past experience and affective assessment of the service; he gets from the product or service [15]. Similarly in relationship marketing, companies are linked with CRM system that helps in building customer satisfaction. Basically the customer relationship officer (CSO) and web portals with the help of E-CRM develops a positive feelings within the customer [16] that further prompt customer in making repeated purchases, resulting in customer loyalty.

According to Yang and Peterson (2004) [17] for building a positive link between customer and the company, loyalty plays an important role. Customers get loyal with the companies only if they deliver better services than their competitors [18]. Therefore they spend less time in evaluating products of different companies and take an immediate decision of making a purchase.

In 2000, Reichheld and Schefter reported that customer loyalty plays an important role in online shopping and the loyalty of the customer is based on the satisfaction he gets from the online vendor [19]. Similarly Researchers in 2002 (Rosenbaum & Huang) reported that the main reason for the companies to adopt E-CRM is to develop customer loyalty by increasing customer satisfaction [20] as proposed in Figure 1. Therefore the following hypothesis is proposed:

- H1: *E-CRM is positively related to Customer Satisfaction.*
- H2: *Customer Satisfaction is positively related to Customer Loyalty.*
- H3: *Customer Satisfaction mediates the relationship between E-CRM and Customer Loyalty.*

**Moderating Role of Anxiety:** In 1994, Maurer and in 1999, Chua, Chen and Wong defined anxiety as a fear an individual has in using a system. It is a type of emotional response that an individual possess while using a system and is different from negative attitude, belief and feeling he or she has related to computer. In case of E-CRM and customer satisfaction Anxiety moderates the relationship (as proposed in Figure: 1). Researchers in past has

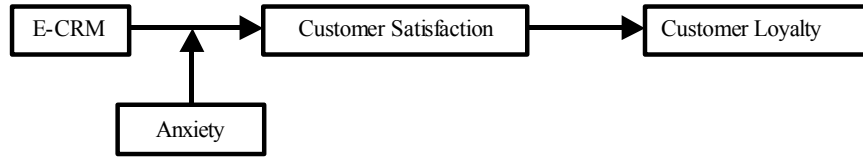


Fig. 1: Proposed research Framework

Table 1: Instrument adapted from past research

Construct	Source
E-CRM	Kelley, Gilbret and Mannicom (2003)
Customer Satisfaction	Vickery <i>et al.</i> , (2004)
Customer Loyalty	Vickery <i>et al.</i> , (2004)
Anxiety	Venkatesh and Bala (2008)

confirmed the link between E-CRM and customer satisfaction[19] but the fear a customer has about the information provided by the Customer Relationship Officer and the web portals by using E-CRM moderates the relationship. Therefore the following hypothesis is proposed:

H4: *The relationship between E-CRM and customer satisfaction is moderated by anxiety such that that the relationship is strong if anxiety is low.*

**Method:** The purpose of conducting this research is to evaluate service provided by the customer relationship officer and web portal of a mobile company by using E-CRM, that further helps in building customer loyalty and customer satisfaction. The respondents who use mobile phones were selected for the study.

**Data Source and Sample:** The target populations were users who use mobile phone service. About 300 questionnaires were distributed among the respondents in public and private Organizations in Pakistan. The total of 6 public and private organizations was selected where the respondents were employees. Random sampling technique was used as mobile phone is own by almost everyone. 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.

**Measurement:** Responses were collected through questionnaire developed in English. Questionnaire was divided into two sections. First section contain questions related to demographic variable like Gender, mobile company name whereas second section contain questions

on E-CRM, Customer Satisfaction, Customer Loyalty, Anxiety. They were measured using a valid item scale developed by past researchers (as depicted in Table 1).

**Procedure:** After collecting the questionnaire the statistical tests were conducted using SPSS 19. In addition macro developed by [21] was used to conduct mediating regression analysis and interaction plots were developed for moderating variable.

## RESULT

Cronbach Alpha was conducted to test the reliability of the instrument, where the results depicted that all the items were above 0.75.

**Mediating Role of Customer Satisfaction and Moderating Role of Anxiety:** The macro developed by [21]. Preacher & Hayes (2007) was run using SPSS to evaluate the mediating role of customer satisfaction. According to researcher “A macro is a sequence of commands that define new functions the user can control to conduct custom analyses”.

E-CRM was taken as independent variable and customer loyalty was taken as Dependent Variable. Overall the model was significant, whereas it depicted  $R^2$  0.32 i.e. the model can explain 32% variation only. Hence there are other determinants of customer satisfaction and customer loyalty which is needed to be tested in order to evaluate customer behavior.

Figure 2 depicts the path coefficient of each path. Three hypotheses were tested and all of them supported, in addition the impact of ECRM on customer loyalty gets stronger due to the mediating role of customer satisfaction. Moreover the mediating results depicted the coefficient value of 0.57 i.e. with the increase in one unit of customer loyalty and with the usage of ECRM the customer satisfaction increases with 57 units.

The interaction plot was developed and the results depicted that with the decrease in anxiety the relationship between ECRM and customer satisfaction gets stronger. The interaction term depicted a coefficient of -0.225, i.e. the decrease in user anxiety towards the usage of ECRM helps in increasing customer satisfaction.

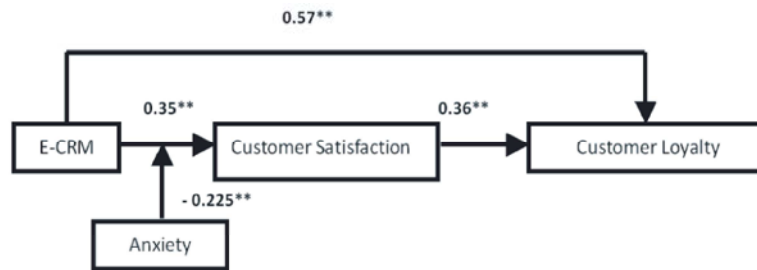


Fig. 2: Path coefficient from the Path analysis results

## CONCLUSION

Researchers in past has conducted research on ECRM and customer satisfaction or customer satisfaction and loyalty. But hardly any research has been conducted that concatenates the three variables together. The current study evaluates the impact of ECRM on customer satisfaction that further helps in building customer loyalty. In addition Anxiety is taken as a moderating variable that moderates the relationship between ECRM and customer satisfaction.

The study concluded that customer satisfaction increases with the use of ECRM the further helps in building customer loyalty. That is customers feel delighted with the service provided by the customer relationship officer or the web portal of the respective mobile company by utilizing ECRM. Moreover the research depicted that anxiety moderates the relationship between ECRM and customer satisfaction such that customer who has a fear in using the system weakens the relationship between ECRM and customer satisfaction. But in the current scenario the level of anxiety is depicted low, because the ECRM used by the mobile companies is trustworthy and respondents responded that up-to-date information is provided by the ECRM that further helps service provider to take corrective actions if needed.

**Limitation and Future Direction:** The limitation of the current study is (1) study failed to evaluate customer response as per the demographic variables like age, mobile company etc. (2) study depicted that approximately 68% variation is till unexplained and there are many other factors which are needed to be studied in order to evaluate customer satisfaction towards the service providing company. (3) Longitudinal study should be conducted. (4) Other than anxiety, self efficacy and Big -5 personalities can also be used as a moderating variable to evaluate the link.

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