

*Full Length Research Paper*

# The influence of usability and enjoyment on electronic customer relationship management performance in Jordan mobile communication services

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Accepted 8 October, 2010

**Electronic customer relationship management performance is a comprehensive business and marketing strategy that integrates people, process, technology and all business activities for attracting and retaining customers over the internet and mobile phone to reduce costs and increase profitability by consolidation the principles of customer loyalty. Therefore, the results of electronic customer relationship management performance are repeat purchase, word of mouth, retention, cross buying, brand loyalty and customer satisfaction. The keen competitive in the communication and mobile phone service market place and the increasing numbers of mobile phone users all over the world has influence the researcher to investigate usability and enjoyment as antecedents of electronic customer relationship management performance in mobile phone services industry. Four hundreds and eighty eight set of questionnaires have returned and analyzed. Two factors been tested to investigate the relationship with E-CRM performance. The analysis shows that usability was positively significant towards E-CRM performance. Enjoyment has failed to predict E-CRM performance. Base on the results, it can be concluded that the mobile service provider has to ensure their services fully satisfied their customer usability. Somehow, future research must investigate other factors as the antecedent for E-CRM performance. Other initiative is to consider a model testing in difference context of electronic service to see any generalization on the research result.**

**Key words:** Electronic customer relationship management, mobile communication services, enjoyment, usability.

## INTRODUCTION

Mobile phones first appeared in United Kingdom during the early 1980s, but were expensive and large. However, modern mobile phones are small, compact, easy to use and have become an essential part of life for many people. Mobile phones enable users to maintain contact with family, friends and business associates. By the end of the 1980s, less than 1% of the UK population had a

mobile phone. By April 2000, there were approximately 25 million mobile phone subscribers (40% of the potential market) and this is grow to 45 million (75% of the potential market) by 2005 (Report of the Royal Society for the Prevention of Accidents, 2004). Furthermore, United Nations report indicated that by the end of 2008, the number of cellular telephones subscribers reach 4 billion people out of 7.6 billion world's population (United Nations report, Al-Rai Magazine, 2008). There has been little work on determining and defining exactly what CRM is in the regular business channels and even less in the e-business channel. Many elements are still unclear and

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causing disagreements among scholars. Technology plays a role in the successful implementation of CRM. Nevertheless, only few studies have discovered the factors that influence E-CRM technology (Avlonitis and Panagopoulos, 2005). Additional research is needed to understand whether and how capabilities of E-CRM technology provide a factor for E-CRM success (Greve and Albers, 2006).

CRM was born from relationship marketing and is simply the practical application of long standing relationship marketing principles which have existed since the dawn of business itself (Gummesson, 2004). However, a number of authors propose that an emphasis on the 4Ps marketing mix is no longer the dominant marketing logic and that RM may be a more appropriate "new" paradigm for marketing thought theory and practice (Dwyer et al., 1987). With increasing focus upon RM, the CRM linkage becomes clear: CRM provides management with the opportunity to implement relationship marketing on a company wide basis effectively. Although the basis of CRM has been around since 1956, it is only within the last 6 to 10 years that CRM has created a significant impact in the business world (Nairn, 2002). E-CRM is a combination of hardware, software, process, applications and management commitment to improve customer service, retain customer, and provide analytical capabilities (Romano and Fjermested, 2002). CRM is a more complex and sophisticated application that mines customer data that has been pulled from all customer touch points, creating a single and comprehensive view of a customer while uncovering profiles of key customers and predicting their purchasing patterns. Technology that tracks and analyzes customer behavior allows companies to easily identify the best customers and focus marketing effort and reward on those who are likely to buy often. Acquiring a better understanding of existing customers allows companies to interact, respond, and communicate more effectively to improve retention rates significantly.

According to Lee et al. (2003b) there is lack of literature on E-CRM and more research work is needed in this area. This paper will discuss the e- service quality, ease of use, enjoyment and usability as antecedents of E-CRM performance in Jordan mobile phone services by reviewing the conceptual article and research findings. E-CRM is a new phenomenon that come out from the internet and web technology to facilitate the implementation of E-CRM. It focuses on internet- or web-based interaction between customer and service provider (Chang et al., 2005). There are two approaches for E-CRM, business approach and technology approach. E-CRM within businesses has increased dramatically over the last few years, and will continue to do so in the future. The market of E-CRM products in all economic sectors increased rapidly to \$125 billion in 2003 from \$34 billion in 2002 (Iconocast, 2003). Many authors agree that there is no unified definition of CRM / E-CRM. The term has been defined in different ways, with no clear agreement, but

there are two approaches to define CRM/E-CRM, management approach, and information technology approach. However, when we emphasis on management approach, some authors defined CRM stand for customer relationship management which is an integrated approach to identifying, acquiring and retaining customer (Ellatif, 2008). Since the differences between CRM and E-CRM as mentions by many authors are minor and obvious, the definition for CRM and E-CRM is almost the same except E-CRM uses the internet as a tool or medium. However, the definition of E-CRM is still not clear but most of the researchers and practitioners agree that E-CRM is a business strategy that applies the technology power to tie together all aspects of a company's business to build long-term customer relationship and customer loyalty.

The "E" in E-CRM not only stands for "electronic" but can also have many other meaning and indications. Suresh (2002) indicate that "the core of E-CRM remains to be cross channel integration and organization; also the six 'E's of E-CRM are briefly explained as follows "Electronic channels, enterprise, empowerment, economics and evaluation". The concept of E-CRM systems refers to the ability to support customers and dealing with them without human treatment, or interference in the narrowest limits. However, it depends on the use channels in order to deal directly with customers through e-mail and website and mobile phone. In addition to some of the techniques, wireless, chatting and web, wireless application protocol and technical ATM are other possible techniques (Yazbek, 2001). E-CRM develops the traditional CRM approach of technology tools, such as internet, website, and wireless, into the e-commerce applications of the overall organization. Some advantages exist when the organization considers using an E-CRM approach to its service interaction marketing, such as quick service/response time, two-way interactive service relationships, and the ability to supply service for customers from anywhere at any time (Pan and Lee, 2003).

It is clear that the relation between the customer and the service providers is become an important issue recently. E-CRM is the main factor to business success. Therefore, it is only natural that companies and service providers to give a greater focus to E-CRM performance. The focus is more on customers instead of products or services; focusing customer's needs and wants to achieve customer's satisfaction and loyalty. E-CRM is all about increasing profitability and enabled businesses to keep customers under control and making the customer feel they are actually a part of the business progress (Shoniregun et al., 2004). Measuring the performance of E-CRM in the organization is very important to assist the companies to increase the revenue and enhance customer loyalty. E-CRM technology should be more advanced and sophisticated to meet the requirement for developing and knowledgeable customers. Greve and

Albers (2006) stated that the usage of CRM technology consistently has a strong impact on CRM performance. They propose that the more comprehensive CRM technology, and higher CRM Technology usage, better CRM performance across the phases of the customer lifecycle. However, CRM technology shows important impacts on the performance of the customer relationship. E-CRM performance has become a growing concern in marketing and information technology research and practice. Yet despite a number of research reports by both practitioners and academic institutions there remains little evidence of any robust relationship between e- service quality, ease of use, enjoyment and usability with E-CRM performance. Moreover, little is known regarding the underlying factors that influence the CRM performance (Chen and Ching, 2004; Wang et al., 2004). This study investigates enjoyment and usability as antecedents of E-CRM performance. Usability is defined as the degree to which a user can complete tasks effectively and efficiently. A usable system is one that meets the needs of the user. Usability is concerned with functionality/usefulness, ease of learning, ease of use, aesthetics, user satisfaction and quality (Uehling, 2000). Gould and Lewis (1985) suggest that any system designed should be easy to learn, easy to remember, and useful that it should include the essential functionality to develop work and productivity, and be easy and pleasant for users.

According to a traditional definition, usability consists of five usability factors: ease of learning, task efficiency, ease of remembering, understandability, subjective satisfaction (Laussen and Younessi, 1998). Recent business surveys propose that up to 50% of E-CRM implementations do not give measurable profits on investment. The limited success of E-CRM implementations can be attributed to usability and resistance factors (Fjermestad and Romano, 2002). They suggest that if organizations want to get the most benefits from their E-CRM implementations, they need to revisit the general principles of usability and resistance and apply them effectively. Manning et al., (1998) expected that 50% of potential sales from a web site are lost when web site visitors cannot find the appropriate product, services, or information. They also found that almost 40% of visitors do not return to a site when their first visit results in a negative experience. Evidently, if the browsers cannot use a web site to find a product or service easily, they will not buy, and will switch to another provider on the website. Recently the rapid advances in wireless and mobile phone communications have led to faster connection speeds, larger device screen size, multiple modes for inputs and new applications. However, one major issue that has not been addressed so far is the usability of mobile phone. Usability of the mobile phone depends on several factors including how the information is organized and browsed (AlShaali and Varshney, 2005). When using mobile phone device. Even with these

advances in telecommunication technology, a majority of mobile phone users were not able to find the desired information, as there has been significant progress in the usability of websites. Service providers attempt to derive and use the lessons and experiences for enhancing the usability of mobile phone. Finally, little empirical research in the services marketing literature has been done to examine behavioral intentions and its antecedent factors in online services (Hackman et al., 2006). This study attempts to address this gap by examining the ability of usability as one of the antecedents to explain behavioral intentions in E-CRM performance context.

Enjoyment can be defined as the degree to which performing an activity is perceived as providing pleasure and joy in its own right, aside from performance consequences (Davis et al., 1989; Venkatesh, 2000). Enjoyment in the mobile phone service context can be viewed as the degree to which the activity of service like chatting, games and so on is perceived as fun and enjoyable. Compared with other activities such as online shopping and information system uses, enjoying mobile phone service is more experience-oriented. However, the most important motive for playing online games is seeking to have fun and pleasure. Players who experience enjoyment and the emotional response of pleasure are more likely to be motivated to play more (Huang and Cappel, 2005). Enjoyment had been added into TAM by (Davis et al., 1992), and proved to be an important antecedent to behavior intention. Previous studies in electronic commerce have so far explored the role of enjoyment in instant messaging (Li et al., 2005), and online shopping (Koufaris, 2002), but not mobile phone service. Previous research found enjoyment to be a critical factor in other online activities such as e-mail use and online shopping (Eighmey and McCord, 1998; Jarvenpaa and Todd, 1997). Because online gaming is an e-commerce application with an emphasis on generating enjoyable experiences, the role of enjoyment in system usage has yielded mixed results. Teo et al. (1999) found that enjoyment has an effect on the frequency of usage, but no significant effect on the variety of usage, and thus they acknowledge the need for other research to examine the role of enjoyment in behavior. Users who perceive the use of mobile phone messaging as enjoyable are more likely to intend to continue using it. In addition, Koufaris (2002) finds that shopping enjoyment plays a significant role in predicting consumer intention to return to a web-based store. Furthermore, Lee et al. (2003a) find that enjoyment not only directly influences behavioral intention but also indirectly influences it through attitude. Koufaris (2002) found that shopping enjoyment could positively influence new web shoppers to return to a site. Jarvenpaa and Todd (1997b) found that online customers who perceive their shopping experience is enjoyable will increase their favorable attitude toward online shopping. Wu and Liu (2007) suggest that enjoyment is important antecedent to

both behavioral intention and behavioral attitude, service providers have to consider the element of enjoyment to provide users with attractive services. When users achieve mobile phone gaming enjoyment, they are more likely to have positive attitudes toward playing mobile phone games and most important, they will be motivated to use the service frequently. Definitions of perceived fun and perceived playfulness are quite similar to the concept of perceived enjoyment. Igbaria et al. (1994) indicated that perceived fun refers to the performance of an activity for no apparent reinforcement other than the process of performing the activity. They found that system usage and perceived fun positively correlated with each other. Furthermore, Moon and Kim (2001) discovered that the perceived playfulness had a positive significant impact on the intention to use the internet. On this basis, we expect that perceived enjoyment affect E-CRM performance.

Generally, there are many reasons to studying enjoyment. According to Wu and Liu (2007) the main reasons for studying enjoyment are; first, the impact of enjoyment on behavioral intention has yet to be examined in the online gaming context. Second, even with strong theoretical basis, Li et al. (2005) stated that the role of enjoyment in instant messaging and system usage have produced mixed findings. In other similar studies, Igbaria et al. (1995) found that there is no significant effect of enjoyment on system usage behavior, whereas Jarvenpaa and Todd (1997) found a significant effect. Intrinsic motivation for using some mobile phone service as chatting, SMS, games and so on captured by the "enjoyment" construct, customer perceived fun and playfulness by using the mobile phone. Therefore, "enjoyment" reflects consumers' perceptions regarding the potential entertainment of using mobile phone service. Based on our knowledge, very few researches have been done on the effect of perceive enjoyment on E-CRM performance. The main objective of this paper is to investigate the possibilities of usability and enjoyment as antecedents of E-CRM performance in Jordan mobile services.

## METHODOLOGY

### Samples for the study

University students are selected as the respondents for this research. In this research, students were chosen as the study samples for several reasons. Firstly, using university students for this study was appropriate because this group is an important target market for mobile phone services providers (Shermach, 2005). The students represent professional users who handle typical mobile phone service activity such as SMS, chatting, games and other services (Li and Zhang, 2005). Furthermore, in a recent study of mobile phone usage, consumers in the 18 - 24 year age group used mobile phones 71% more than the average for all age groups (Telephia, 2006). A stratified sampling was used to select approximately equal numbers of customers from each university. Questionnaires distributed to five universities in the Northern, Southern and Central States of Jordan. 488 questionnaires returned and analysis. This brings the response rate of around 57%.

All items were adopted from previous researches. Each of the items was accompanied by five -point response format, ranging from 5 = strongly agree to 1 = strongly disagree. Before the actual research, a pilot study was conducted to investigate the reliability and validity of the items, which are mostly adopted from the previous research early responses are compared to late responses (Armstrong and Overton, 1977). According to a t-test analysis, these two groups of respondents had no significant differences across all of the variables. Accordingly, it seems that non-response bias did not appear to be a significant problem.

### Measurement

The entire dimension used in this research is adapted from the previous research. For the purpose of the current study, the wording of the scale was modified slightly to match the domain of mobile phone users. The details are explained below in Table 1.

## RESULTS AND DISCUSSION

### Correlation analysis

Pearson correlation was used to describe the strength and direction of the relationship between two variables (Pallant, 2001). The values of the correlation coefficients ( $r$ ) given in the Table 2 indicate the strength of the relationship between variables. The computation of the person correlation coefficient was performed to obtain an understanding of the relationship between all variables in the study. The value of the correlation coefficients ( $r$ ) indicates the strength of the relationship between the variables. One of the antecedents is significantly correlated with ECRM performance within medium to large  $r$  scores that above 0.35. According to Tabachnick and Fidell (1996) and Pallant (2001) the correlation between predictor and dependent variables must be below 0.7. If the score is more than 0.7, the variables must be deleted from the study. On the other hand, majority of the antecedents are statistically correlated with E-CRM performance with correlation values ranging from .004\*\* to .51\*\* as shown in Table 2.

### Regression analysis

To determine the effect of E- service quality, ease of use, usability and enjoyment on E-CRM performance?" regression analysis was undertaken on the antecedent factors and E-CRM performance. The major assumptions take in our consideration are sample size, Multicollinearity and singularity, Outliers, Normality, linearity, homoscedasticity. All these assumptions have been tested to make this data suitable for regression analysis. Table 3 below provides evidence on the influence of the antecedent factors on E-CRM performance. With the F-statistic of 66.327 and Significance 0.000(a) provides evidence that the relationship between the independent and dependent variables is significant ( $R^2 = 0.555$ ; Sig = 0.000(a)). The  $R^2$  obtained indicates that the antecedent factors

**Table 1.** Sources of the items to represent the variables.

Variables	Questionnaire design	Previous $\alpha$ -value	Sources
E-customer relationship management performance	Likert scale 1-5	0.84- 0.92	Wang et al. (2004)
Enjoyment	Likert scale 1-5	0.87	Nysveen et al. (2005)
Usability	Likert scale 1-5	0.91	Lewis (1995)

**Table 2.** Person correlations of study variables.

	E-CRM	Usability	Enjoyment
E-CRM	1		
Usability	0.51**	1	
Enjoyment	-.045	0.004	1

\*\*Correlation is significant at the 0.01 level (2-tailed). Correlation is significant at the 0.05 level (2-tailed). E-CRM = Electronic customer relationship management performance.

**Table 3.** Multiple regression analysis.

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.	Collinearity statistics	
	B	Std. Error	$\beta$			Tolerance	VIF
(Constant)	-0.360	0.236		-1.526	0.128		
Usability	0.149	0.040	0.129	3.725	0.000	0.668	1.496
Enjoyment	-0.037	0.028	-0.038	-1.319	0.188	0.988	1.012

Note; D V: E-CRM  $R = 0.745^a$ ;  $R^2 = 0.555$ ;  $F = 66.327$ ;  $Sig = 0.000$ .

that the antecedent factors account for 55.5% of the variation in E-CRM performance. Of all the variables included in the regression equation, two variables emerged as significant predictors of E-CRM performance. These factors are enjoyment and usability.

This research has found a positive relationship between perceived usability and electronic customer relationship management ECRM performance. This finding is consistent with the previous researches by Casalo et al. (2008) who found that website usability has a direct and positive influence on customer satisfaction in the e-banking business; they indicated that customer satisfaction with previous interactions with the bank website had a positive effect on both customer loyalty and positive WOM. Consequently, greater levels of usability will be associated with lower levels of difficulty to manage that functionality (Davis, 1989) and, as a result, usability has been traditionally considered a key factor for predicting intentions to use a system (Davis, 1989; Teo et al., 2003). Particularly, focusing attention on the internet, web-site usability reflects the perceived ease of navigating the site or making purchases over the internet and it is considered a critical factor on the development of

e-commerce (e-CRM). Greater usability requires minor searching costs and a better comprehension of the contents and tasks in a website; accordingly, it may help to reduce complexity and supply ease and usefulness services (Luis et al., 2008), which is a key aspect when providing mobile phone services. Therefore, we propose that usability may have a direct influence on e-CRM performance. This is caused by the fact that usability helps to satisfy consumer needs in terms of manageability of the service and, as a result, greater levels of customer satisfaction and loyalty and positive WOM.

Finally, the results of this study indicate that there is a negative relationship between perceive enjoyment and E-CRM performance. This is possibly because the contact of previous studies are on internet usage, online banking and online shopping but our study is on mobile phone service. Furthermore, these studies conducted in western countries, and no study has been done in Arab countries and the two situations are difference. This finding is consistent with the previous researches by Igbaria et al. (1995) who found that enjoyment has no statistically significant effect on the acceptance of data processing systems. They indicated that perceived enjoyment

correlates positively with time of use but not with frequency of use or number of tasks. Similarly, Spears (2005) found that shopping enjoyment was not a significant predictor on the emotional reactions and shopping enjoyment in visiting websites announced in advertisements.

## RESEARCH CONTRIBUTION AND LIMITATION

The contribution of this research from the theoretical perspective lies in identifying multiple ways through which usability and enjoyment impact e-CRM performance, principally in the context of mobile phone service in Jordan. The present study contributes to the literature by investigating the issue of e-CRM performance within the context of mobile phone service subscribers who are directly experience using the services. Since subscribers have direct experience in using services, it is logical if we choose them to determine the level of e-CRM performance in the services. This study helps to build theory concerning customer intention to stay with service providers longer, deeper and build long lasting relationship with mobile phone service providers. This study constructed e-CRM performance as relationship intention that is similar to the concept of behavior intention in the technology acceptance model (Venkantesh and Davis, 2000).

The results of this study give several implications for mobile service providers and marketing managers with regard to how to plan and market services that will be considered valuable by customers and used in the future. Furthermore, the present study considered as important grounds for formulating and implementing e-CRM performance in assessing service providers to assign proportionate amount of resources to achieve sustainable customer loyalty. In addition, results of this research will also go a long way in minimizing the observed inconsistency between; the service provider strategy and customers perspective, which enable service providers to compare their customer perception of their offering strategy in relation to other providers and their customers to adjust their offering strategy. However, there is some limitation of this research. From a methodological point of view, data in this research were obtained from university students in the selected universities. It would be useful to obtain a broader sample of respondents in the future studies. This would minimize any potential bias in the data resulting from the level of the informants. While student subjects have been found to be appropriate for theory testing (Shimp, Hyatt and Snyder, 1991) the findings of this study should be tested on other populations of interest to marketers. While it is likely that relationships are important to customers in a variety of target markets and scenarios, each situation is unique and should be examined carefully. In addition to the limited sampling framework, another limitation is associated with the use of self-completion survey methods. Even though survey

research is the most widely used approach in the world (Neuman, 2003), there are a number of problems associated with this approach. The lack of researcher control in self-completion process necessitates that the resultant data sample will not be fully representative of the population as valid respondents may choose not to complete the survey. In addition, respondents sometimes give expected answers or pattern responses to questions.

## Conclusions

This study found usability that one of the determinants of E-CRM performance. However there is no significant relationship between enjoyment and E-CRM performance, the possible reason is that University students have many services to enjoy more than mobile phone service, such as, internet services, computer games, sports, and libraries. Therefore, students use the mobile phone for other purposes such as making and receiving calls, SMS service, discussing studying issues but not for enjoyment. Furthermore, most of the students use old types of mobile phone and this mobile phone have no facilities for internet serving. Therefore, they cannot enjoy the chatting or games service provided by the company. Concerning the factor that influencing E-CRM performance, the present research suggests that only usability is important determinants of E-CRM performance. Mobile phone service providers should strive on it to improve E-CRM performance in their efforts to attain higher level of customer loyalty. The current study finding provides beneficial implications for both academic research and practitioners based on an insightful review of the existing work on some of the antecedents of E-CRM performance. However, since there are so many other factors that might influence E-CRM performance besides the chosen factors, it would be useful and practical if they modeled and tested in an integrated framework and expanding the framework across industries and integrating more important factor that may influence E-CRM performance.

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