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E- Service Quality, Ease of Use, Usability and Enjoyment as Antecedents of E-CRM Performance: An Empirical Investigation in Jordan Mobile Phone Services

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ABSTRACT

Electronic Customer relationship management performance E-CRM 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 E-CRM 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 researchers to investigate ease of use, usability, enjoyment and e- service quality as antecedents of electronic customer relationship management performance in mobile phone services industry. 488 questionnaires have returned and analyzed. Four factors been tested to investigate the relationship with E-CRM performance. The analysis shown that e- service quality, ease of use and usability was positively significant towards E-CRM performance. Enjoyment has failed to predict E-CRM performance. This paper makes a theoretical and methodological contribution and suggestion for the managers in improving their E-CRM performance in mobile phone service industry.

Key words: E-customer relationship management performance, Mobile Phone Services, e- service quality, ease of use, enjoyment and usability.

Key words: relationship management, CRM

1. Introduction

The development of wireless communication systems started in the 1930s with the use of 'Walkie-talkies' during the Second World War to enable foot soldiers to stay in contact with the headquarters (Elliott

and Philips, 2004). In the US, AT&T Bell introduced the first commercial radiotelephone service in 1946, to connect between mobile users in cars and the public fixed network. The Improved Mobile Telephone Service (IMTS) launched by Bell Systems in the 1960s, which laid the basis for commercial-sector mobile communications. Developments in microprocessor technologies in the late 1970s

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and early 1980s enabled the introduction of the reliable wireless communications system, the so-called first generation. Furthermore, Mobile telephony developed out of radiotelephony in the early part of the twentieth century, but it was primarily used by naval, military, police and fire services (Gascoigne, 1974).

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 four billion people out of 7.6 billion the whole world's population (United Nations report, Al-Rai Magazine, 2008).

Recently, mobile phone service industry plays a significant role in all sectors. Therefore, this role cannot be ignored. Therefore, no economy can achieve an appreciable level of development without effective telecom sector. Moreover, Global telecom spending put at US \$1.5 trillion for the year 2004 and reached US \$2.0 trillion dollars by 2007 (Telecommunications Industry Association: Industry Playbook 2004). Furthermore, the role of the information and communication technology ICT sector in enhancing sustainable development in Jordan has expanding considerably in the last few years, substantial steps have been taken in the legal and regulatory environment that will facilitate the realization of the growth ICT sector in Jordan. Dynamic changes in the development of the telecoms sector occurred recently.

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 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- Kelley, Gilbert and Mannicom, (2003) 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.

2. Literature Review

2.1 Electronic Customer Relationship Management E-CRM

E-CRM is a new phenomena 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, Liao and Hsiao, 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 by 2004, up 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 & 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 e-service quality, ease of use, enjoyment and usability as antecedents of E-CRM performance.

2.2. Usability

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 (Lauesen and Younessi, 1988). 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 (AlShaalii 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.

2.3 Ease of use

Ease of use is defined as the degree to which a person believes that using an information system would be free of effort. It is one of the “classical” concepts in information systems research (Davis 1989; Sanders and Manrodt, 2003; Venkatesh, 2000). A significant body of research in information systems has accumulated evidence for the existence of an effect of ease of use on initial user acceptance and sustained usage of systems (Venkatesh, 2000).

Some previous researchers have noted perceived ease of use as the extent the person accepts using services with no additional cost (Davis et al., 1989; Al-Gahtani, 2001). Davis, (1989); Davis et al., 1989) posits perceived ease of use as the extent to which a person believes that using a particular system will be free of effort. .

Gefen and Straub, (2000) propose that the significance of perceived ease of use will vary with the type of task being addressed. They hypothesize that ease of use will not have a important influence on usage for something that is task oriented, such as making a purchase online, but will be significant in a task that is more essential, such as gathering information.

The two constructs, perceived ease of use and perceived usefulness proposed in TAM, have been analyzed exclusively and used to link with other external variables such as system attributes and social norms, and are proved as effectively predict the individual’s

actual behavior from his/her behavioral intention (Davis, 1989, 1993).

Furthermore, a study by Ramayah and Lo, (2007) found that systems or technologies, which appeared to be easy to use and easy to understand, would be more useful from the user’s perspective. Bruggen and Wierenga,(2005) hypothesize that ease of use will be positively related to the individual impact of CRM systems. The success of the system used depends on the level of ease of use of the system. In conclusion, it can be concluded that ease of use is one of the technology factor that plays significant role in E-CRM performance. Therefore, this study proposes ease of use as one of the antecedents that influence E-CRM performance.

2.4 Enjoyment

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, P.Y, Chau, and Lou 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, H, Lim, G and Lai, (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., (2003) 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, Schiffman and Wicckowshi (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 effects 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.

2.5 E-service quality

During the 1980s, service quality received a great deal of attention as a key strategic factor for product differentiation to increase market share and boost profits (Phillips, Chang and Buzzell 1983; Buzzell and Gale, 1987). E service quality is another factor influence E-CRM performance, this research focused on the process in which consumers evaluate service quality.

E service quality is a new concept started on 2002. Ziethaml et al., (2002) introduced the concept of electronic service quality (e-SQ), which is defined as "the extent to which a website facilitates efficient and effective shopping, purchasing and delivery of products and services". Furthermore, service quality can be defined also as "the difference between customer expectation for service

performance prior to the service encounter and their perceptions of the service received” (Asubonteng, McCleary and Swan 1996).

Many different understandings of commonly used terms SQ, was presented in the literature such as online service quality or website service quality, this problem due to the lack of formal service quality definition (Zeithaml et al., 2002). On the other hand, Zeithaml et al., (2002) introduced the concept electronic service quality (e-SQ) and their role in service quality delivery to customers. They provided the first formal definition of e-SQ. They define service quality as "the extent to which a website facilitates efficient and effective shopping, purchasing and delivery of products and services"

The informational website is a simplest website, which provides information about a company and its products or services and generally offers contact information with different contact channels. Nowadays, many commercial websites are on a transactional level which offer payment functions and online reservation, and help customers choosing product and paying directly on the website. Transactional websites have also been found to be more efficient in attracting potential customers (Nysveen and Leshagen, 2001a, b; Iliachenko, 2006).

Quality is related to customer satisfaction, retention and loyalty. Therefore, it is expected to be a determinant of success not only in a traditional environment, but also in an online market space (Wolfenbarger and Gilly, 2003). Service quality is important especially in the telecommunication industry. Wal, Pampallis and Bond (2002) conduct a research to investigate service quality in a cellular telecommunications company in South African in order to improve delivery of customer service. They stressed that the current state of the telecommunications industry in South Africa can be assessed using porters five forces model; namely, these are tangibles, reliability, responsiveness, assurance and empathy (Wal et

al., 2002). These are widely used and proven model that potential competitive force.

With the internet and technology development, the web site has replaced the physical business unit. Perceived web site usability and new electronic environment is a very significant part of the corporate image and can affect shopping behavior. Today, web site design has been considered as a key factor when the organization provides services for its consumers use the Internet as a communication channel (Cristobal et al., 2007).

Perceived service quality is an overall judgment of a service that contributes to customer satisfaction, purchase intentions, and firm performance (Cronin and Taylor, 1992; Zeithaml et al., 1996). Many studies have been conducted to investigate the influence of service quality on customer satisfaction. Anderson, Fornell and Lehmann (1994) indicate that service quality has a positive effect on customer satisfaction and company's profitability. It is clear that increasing customer satisfaction have direct effect on customer intention. Rust and Zahorik, (1993) assumes that the development of service quality leads to an increase in perceived quality and consequently increases consumer satisfaction and loyalty. The significance of service quality as an antecedent of customer satisfaction and eventually customer loyalty has been approved (Zeithaml et al., 1996; Rust, Zahorik and Keiningham 1995). Wang et al., (2004) iterated that customer satisfaction contributes to more on E-CRM performance. Therefore, any variable that have possible impact toward customer satisfaction will also give a strong impact on E-CRM performance. Customer satisfaction is one of the major dimensions in E-CRM performance.

3. Methodology

3.1 Samples for the study

University students are selected as the respondents for this research. 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 percent. 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.

3.2 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.

4. Findings

4.1 Correlation Analysis

Person 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 table2 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.

Table 1: Sources of the Items to Represent the Variables

Variables	Question-naire design	Prev. alpha value	Sources
E-customer relationship management performance	Likert scale 1-5	0.84-0.92	Wang et al. (2004)
ease of use	Likert scale 1-5	0.92	Bruggen and Wierenga, 2005) Davis (1989)
Enjoyment	Likert scale 1-5	0.87	Nysveen et al., 2005)
Usability	Likert scale 1-5	0.91-0.96	(Lewis, J.R. 1995)
E-service quality	Likert scale 1-5	0.61-0.87	Yang Z, 2001

Majority of the antecedents are 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 .27(**) to.63 (***) as shown in table 2.

Table 2 Person correlations of study variables

	ECRM	USBL	EOUS	USFL	ESQ	ENJ
ECRM	1					
USBL	.51(**)	1				
EOUS	.27(**)	.18(**)	1			
ESQ	.63(**)	.51(**)	.23(**)	.38(**)	1	
ENJ	-.045	-.004	-.022	.066	.013	1

** Correlation is significant at the 0.01 level (2-tailed).

Correlation is significant at the 0.05 level (2-tailed).

Electronic customer relationship management performance = ECRM, usability = USBL, Ease of use = EOUS, electronic service quality = ESQ, enjoyment = ENJ

4.2 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 Sig 0.000(a) provides evidence that the relationship between the independents and dependent variables is significant (R2 =.555; Sig =.000(a)). The R2 obtained indicates that the antecedent factors account for 55.5 percent of the variation in E-CRM performance. Of all the variables included in the regression equation, three variables emerged as significant predictors of E-CRM performance. These are E- service quality, ease of use, usability.

5. Conclusions

This study proved that there are three antecedent variables that have a significant relationship with E-CRM performance, these factors are e-service quality, ease of use and usability. 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 librariesetc. Therefore, students use the mobile phone for other purposes as making and receiving calls, SMS service, discussing studying issues but

Table 3: multiple regression analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-.360	.236		-1.526	.128		
Usability	.149	.040	.129	3.725	.000	.668	1.496
Ease of use	.083	.030	.091	2.777	.006	.746	1.340
Enjoyment	-.037	.028	-.038	-1.319	.188	.988	1.012
Electronic service quality	.254	.049	.211	5.211	.000	.490	2.043

Note: D V: ECRM R =.745(a); R Square=.555; F=66.327; Sig=000

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.

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.

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.

Concerning the factors that influencing E-CRM performance. The present research suggests several factors as important determinants of E-CRM performance. Mobile phone service providers should strive to improve E-CRM performance in their efforts to attain higher level of customer loyalty. In summary, we believe that the current study 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.

References

- Al-Gahtani, S. (2001). The applicability of TAM outside North America: an empirical test in the United Kingdom. *Information Resources Management Journal*, 2 (July-September).
- AlShaali, S., and Varshney, U. (2005). On the usability of mobile commerce. *International Journal of Mobile Communications*, 3(1), 29-37.
- Anderson, E., Fornell, C., and Lehmann, D. (1994). Customer satisfaction, market share, and profitability: findings from Sweden. *Journal of Marketing*, 58, 53-66.
- Armstrong, J., and Overton, T. S. (1977). Estimating non-response bias in mail survey. *Journal of Marketing Research*, 4, 369-492.
- Asubonteng, P., McCleary, K. J., and Swan, J. E. (1996). SERVQUAL revisited: a critical review of service quality. *The Journal of Services Marketing*, 10(6), 62-81.
- Avlonitis, G., and Panagopoulos, N. (2005). Antecedents and consequences of CRM technology acceptance in the sales force. *Industrial Marketing Management*, 34, 355-368.
- Bruggen, G. H. V., and Wierenga, B. (2005). *When are CRM Systems Successful? The Perspective of the User and of the Organization*. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=828168.
- Buzzell, R. D., and Gale, B. T. (1987). *The PIMS Principles*. The Free Press, New York, NY.
- Chang, T.-M., Liao, L.-L., & Hsiao, W.-F. (2005). An Empirical Study on the E-CRM Performance Influence Model for Service Sectors in Taiwan. *Proceedings 2005 IEEE International Conference on e-Technology, e-Commerce and e-Service (EEE'05)*, 240-245.

- Chen, H. M., and Kazman, R. (2007). The affective and cognitive impacts of perceived touch on online customers' intention to return in the web-based eCRM environment. *Journal of Electronic Commerce in Organizations*, 5(1), 69-91.
- Chen, J. S., and Ching, R. K. (2004). An empirical study of the relationship of IT intensity and organizational absorptive capacity on CRM performance. *Journal of Global Information Management*, 12(1), 1-17.
- Churchill, G., and Iacobucci, D. (2004). *Marketing Research: Methodological Foundations*, 9th ed, Thomson South-Western, Ohio.
- Cristobal, E., Flavia'n, C. and Guinali'ú, M. (2007). Perceived e-service quality (PeSQ) Measurement validation and effects on consumer satisfaction and web site loyalty. *Managing Service Quality*, 17(3), 317-340.
- Cronin, J.J. and Taylor, S.A. (1992). Measuring service quality: a reexamination and extension. *Journal of Marketing Research*, 56, 55-68.
- Davis, D. M. (1993). Social Impact of Cellular Telephone Usage in Hawaii. In J. G. Savage & D. J. Wedemeyer, (Eds.) *Proceedings of Pacific Telecommunication Conference*, Vol. 2, pp. 641-648.
- Davis, F. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13, 983-1003.
- Davis, F., Bagozzi, R. and Warshaw, P. (1989). User acceptance of computer technology: a comparison of two theoretical models. *Management Science*, 35(8), 982-1003.
- Davis, F.D., Bagozzi, R.P. and Warshaw, P.R. (1992). Extrinsic and intrinsic motivation to use computers in the workplace. *Journal of Applied Social Psychology*, 22, 1111-1132.
- Dwyer, F., Schurr, P. and Sejo, O. (1987). Developing buyer-seller relationship. *Journal of Marketing*, 51(April), 11-27.
- Eighmey, J. and McCord, L. (1998). Adding value in the information age: Uses and gratifications of sites on the world wide web-the world wide web presents new challenges for advertisers and consumers alike. *Journal of Business Research*, 4(3), 187-194.
- Ellatif, M. M. A. (2008). *A Cluster Technique to Evaluate Effect of ECRM on Customers' Satisfaction of E-Commerce Websites*.
- Elliott, G., and Philips, N. (2004). *Mobile Commerce & Wireless Computing Systems*. pearson Education, New York, NY.
- Fjermestad, J., and Romano, N. (2002). An integrative implementation framework for electronic customer relationship management: Revisiting the general principles of usability and resistance. *Proceedings of the 36th Hawaii International Conference on System Sciences (HICSS'03)*.
- Flavia'n, C., Guinali'ú, M., and Gurrea, R. (2006). The role played by perceived usability, satisfaction and consumer trust on website loyalty. *Information and Management*, 43(1), 1-14.
- Gascoigne, G. (1974). *History of Radiotelephony and Telephony Telecommunications*. NY: Ayer Co. Pub.
- Gefen, D. and Straub, D. (2000). The relative use of perceived ease of use in IS adoption: A study of e-commerce adoption. *Journal of the Association for Information Systems*, 1(8), 1-28.
- Goldenberg, B. (2000). *What is CRM? What is an e-customer? Why you need them now*.
- Gould, J. D. and Lewis, C. (1985). Designing for usability: key principles and what designers think. *Communications of the ACM*, 28(3), 300-311.

- Greve, G. and Albers, S. (2006). Determinants of performance in customer relationship management – assessing the technology usage – performance link. *Proceedings of the 39th Hawaii International Conference on System Sciences - 2006*.
- Griffin, J. (1995). *Customer Loyalty: How to Earn It, How to Keep It*. Lexington Books, New York, NY.
- Gummerus, J., Liljander, v., P, M. and Riel, A. v. (2004). Customer loyalty to content-based Web sites: the case of an online health-care service. *Journal of Services Marketing*, 18(3), 175-186.
- Gummesson, E. (2004). Return on relationships (ROR): The value of relationship marketing and CRM in business-to-business contexts. *The Journal of Business and Industrial Marketing*, 19(2), 136-148.
- Hackman, D., Gundergan, S. P., Wang, P. and Daniel, K. (2006). A service perspective on modelling intentions of on-line purchasing. *Journal of Service Marketing*, 20(7), 459-470.
- Hong, W., Thong, J. Y. L., Wong, W.-M., and Tam, K.-Y. (2001). Determinants of user acceptance of digital libraries: an empirical examination of individual differences and system characteristics. *Journal of Management Information Systems*, 18(3), 97-125.
- Hoffman D.L., Novak T.P. and Peralta M. (1999). Building consumer trust online. *Communications of the ACM*, Vol 42, No 4, pp. 80-85.
- Huang, Z. and Cappel, J. J. (2005). Assessment of a web-based learning game in an information systems course. *Journal of Computer Information Systems*, 45(4), 42-50.
- Iconocast. (2003). DotCom Marketing – CRM Online. Available at: <http://www.iconocast.com> [Accessed 5 May 2007].
- Igbaria, M., Schiffman, S. J. and Wicckowshi, T. S. (1994). The respective roles of perceived usefulness and perceived fun in the acceptance of microcomputer technology. *Behavior and Information Technology*, 13(6), 349-361.
- Iliachenko, E. Y. (2006). *Electronic Service Quality (E-Sq) In Tourism: Development Of A Scale For The Assessment Of E-Sq Of Tourism Websites*. Luleå University of Technology, Luleå, Sweden.
- Jarvenpaa, S. L., and Todd, P. A. (1997). Consumer reactions to electronic shopping on the world wide web. *International Journal of Electronic Commerce*, 1(2), 59-88.
- Jones, M., Mothersbaugh, D. and Beatty, S. (2002). Why customers stay: Measuring the underlying dimensions of service switching costs and managing their differential strategic outcomes. *Journal of Business Research*, 55, 441-450.
- Keen, P.G.W. (1997). *Competing in Internet Business*. Eburon Publishers, Delft, Netherlands.
- Kim, J.W., Choi, J., Qualls, W. and Park, J. (2004). The impact of CRM on firm and relationship level performance in distribution networks. *Communication of the Association for Information Systems*, 14, 632-652.
- Koufaris, M. (2002). Applying the technology acceptance model and flow theory to online consumer behavior. *Information Systems Research*, 13(2), 205-223.
- Lallmahamood M. (2007). An examination of individual's perceived security and privacy of the internet in Malaysia and the influence of this on their intention to use e-commerce: using an extension of the technology acceptance model. *Journal of Internet Banking and Commerce*, Vol. 12, No.3, pp. 1-26.
- Lam, S.Y., Shankar, V., Erramilli, M.K. and Murthy, E. (2004). Customer value,

- satisfaction, loyalty, and switching costs: An illustration from a business-to-business service context. *Journal of the Academy of Marketing Science*, Vol. 32, No. 3, pp. 293-311.
- Lauesen, S. and Younessi, H. (1988). Six styles for usability requirements. *Proceedings of REFSQ'98*, Presses Universitaires de Namur.
- Lee, J.-N., Pi, S.-M., Kwok, R. C.-w. and Huynh, M.Q. (2003). The contribution of commitment value in internet commerce: an empirical investigation. *Journal of the Association for Information Systems*, 4, 39-64.
- Lee-Kelley, L., Gilbert, D. and Mannicom, R. (2003). How E-CRM can enhance customer loyalty? *Marketing Intelligence & Planning*, 21(4/5), 239-248.
- Lewis, J. R. (1995). IBM computer usability satisfaction questionnaires: Psychometric evaluation and instructions for use. *International Journal of Human-Computer Interaction*, 7(1), 57-78.
- Li, D., P.Y.K, Chau, and Lou, H. (2005). Understanding individual adoption of instant messaging: An empirical investigation. *Journal of the Association for Information Systems*, 6(4), 102-129.
- Manning, H., McCarthy, J., and Souza, R. (1998). Why most web sites fail. *Forrester Research: Interactive Technology Series* 3(7).
- Moon, J. W. AND Kim, Y. G. (2001). Extending the TAM for a world-wide-web context. *Information and Management*, 38(4), 217-230.
- Mukherjee, A. and Nath, P. (2003). A model of trust in online relationship banking. *The International Journal of Bank Marketing*, 21(1), pp. 5-16.
- Nairn, A. (2002). CRM: Helpful or full of hype? *Journal of Database Marketing*, 9(4), 376-382.
- Nysveen, H. and Lexhagen, M. (2001). Swedish and Norwegian tourism websites: the importance of reservation services and value-added services. *Scandinavian Journal of Hospitality and Tourism*, 1(1), 38-53.
- Nysveen, H., Pedersen, P. E. and Thorbjørnsen, H. (2005). Explaining intention to use mobile chat services: moderating effects of gender. *Journal of Consumer Marketing*, 22(5), 247-256.
- Pallant, J. (2001). *SPSS Survival Manual: A Step by Step to Data Analysis Using SPSS*. Allen & Unwin, Australia.
- Pan, S. and Lee, J. (2003). Using E-CRM for a unified view of the customer. *Communications of the ACM*, 46 (4), pp. 95-99.
- Parasuraman, A. (2004). Assessing and improving service performance for maximum impact: insights from a two-decade-long research journey. *Performance Measurement and Metrics*, 5(2), 45-52.
- Phillips, L. D., Chang, D. R. and Buzzell, R. D. (1983). Product quality, cost position and business performance: Test of some key hypotheses. *Journal of Marketing Research*, 47, 26-43.
- Pikkarainen, T., Pikkarainen, K., Karjaluoto, H. and Pahlila, S. (2004). Consumer acceptance of online banking: an extension of the technology acceptance model. *Internet Research*, Vol. 14, No. 3, pp. 224-35.
- Ptricio L., Fisk R.P. and Cunha, J.F., (2003). Improving satisfaction with bank service offerings: measuring the contribution of each delivery channel. *Managing Service Quality*, 13 (6), 471-482.
- Ramayah, T. and Lo, M.-C. (2007). Impact of shared beliefs on “perceived usefulness” and “ease of use” in the implementation of an enterprise resource planning system. *Management Research News*, 30(6), 420-431.

- Reichheld, F.F. and Schefter, P. (2000). E-loyalty: Your secret weapon on the web. *Harvard Business Review*, 78, 105-113.
- Royal Society for the Prevention of Accidents, R. H., Edgbaston Park. (2004). *The Risk of Using a Mobile Phone While Driving*. The Royal Society for the Prevention of Accidents, RoSPA House. Available at: www.rospace.com.
- Rexha, N., Kingshott, R.P.J. Aw A.S.S., (2003). The impact of relational plan on adoption of electronic banking, *Journal of Services Marketing*, Vol. 17, No. 1, pp. 53-67.
- Romano, N. C. and Fjermestad, J. (2002). Electronic commerce customer relationship management: An assessment of research. *International Journal of Electronic Commerce* 6(2), 61-113.
- Rust, R. T. and Zahorik, A. J. (1993). Customer satisfaction, customer retention, and market share. *Journal of Retailing*, 69(2), 193-215.
- Rust, R. T., Zahorik, A. J. and Keiningham, T. L. (1995). Return of quality (ROQ): Making service quality financially accountable. *Journal of Marketing*, 59, 58-70.
- Sanders, N. R. and Manrodt, K. B. (2003). Forecasting software in practice: Use, satisfaction, and performance. *Interfaces*, 33(5), 90-93.
- Sathye, M. (1999). Adoption of internet banking by Australian consumers: An empirical investigation. *International Journal of Bank Marketing*, Vol. 17, No. 7, pp. 324-34.
- Sekaran, U. (2000). *Research Methods for Business: A Skill Building Approach* (2nd edition). New York, NY: John Wiley and Sons.
- Shoniregun, C. A., Omoegun, A., Brown-West, D. and Logvynovskiy, O. (2004). Can eCRM and Trust improve eC customer base? *Proceedings of the IEEE International Conference on E-Commerce Technology*.
- Slater, S.F. (1997). Developing a customer value-based theory of the firm. *Journal of the Academy of Marketing Science*, 25, 162-167.
- Suresh, H. (2002). *Customer Relationship Management: An Opportunity for Competitive Advantage*. PSG Institute of Management Articles, India.
- Teo, T. S. H., Lim, V. K. G., and Lai, R. Y. C. (1999). Intrinsic and extrinsic motivation in Internet usage. *International Journal of Management Science*, 27, 25-37.
- Uehling, D. L. (2000). *Handbook for Designing a Usable Web Site, Issues of Usability for Web Sites*.
- United Nations Report. (2008). Cellular Telephones Subscribers. *Al-Rai Magazine*. Available at: http://www.alrai.com/pages.php?opinion_id=9847, Retrieved at 29/12/2008.
- Venkatesh, V. (2000). Determinants of perceived ease of use: integrating control, intrinsic motivation, and emotion into the technology acceptance model. *Information Systems Research*, 4(4), 342-365.
- Venkatesh, V. Morris, M., Davis, G., and Davis, F. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(2), 425-478.
- Venkatesh, V. and Morris, M. G. (2000). Why don't men ever stop to ask for directions: gender, social influence, and their role in technology acceptance and usage behavior? *MIS Quarterly*, 24(1), 115-139.
- Wal, R. W. E. V. d., Pampallis, A. and Bond, G. (2002). Service quality in a cellular telecommunications company: a South African experience. *Managing Service Quality*, 12(5), 323-335.

Wang, Y., Lo, H. P., Chi, R. and Yang, Y. (2004). An integrated framework for customer value and customer-relationship management performance: A customer-based perspective from China. *Managing Service Quality*, 14(2/3), 169-182.

Wolfenbarger, M. F. and Gilly, M. C. (2003). eTailQ: Dimensionalising, measuring and predicting eTail quality. *Journal of Retailing*, 79, 183-198.

Woodruff, R.B. (1997). Customer value: the next source for competitive advantage. *Journal of the Academy of Marketing Science*, Vol. 25, No. 2, pp. 139-53.

Wu, J. and Liu, D. (2007). The effects of trust and enjoyment on intention to play online games. *Journal of Electronic Commerce Research*, 8(2), 128-140.

Yazbek, A. (2001). Spending on Information Technology in the Middle East and North

Africa. *Asharq Al-Awsat*. Available at: http://www.aawsat.com/details.asp?section=14&article=58704&issue_no=8337.

Zeithaml, V., Parasuraman, A. and Malhorta, A. (2002). Service quality delivery through web sites: a critical review of extant knowledge. *Journal of the Academy of Marketing Science*, 30(4), 362-375.

Zeithaml, V. A. (2000). Service quality, profitability and the economic worth of customers: what we know and what we need to learn. *Journal of the Academy of Marketing Science*, 28(1), 67-85.

Zeithaml, V. A., Berry, L. L. and Parasuraman, A. (1996). The behavioral consequences of service quality. *Journal of Marketing*, 60, 31-46.