

## THE IMPACT OF ELECTRONIC CUSTOMER RELATIONSHIP MANAGEMENT ON CONSUMER'S BEHAVIOR

Usman Musa Zakari Usman, Abdullah Nabeel Jalal, Mahdi Alhaji Musa  
Department of Information Systems, Universiti Teknologi Malaysia (UTM),  
Skudai, Johor Bahru 81310, Malaysia.

### ABSTRACT

*Electronics customer relationship management (E-CRM) is a business and marketing strategy that analyzes about consumer's needs and behavior in order to create an effective relationship between an organization and its consumers. E-CRM is a combination of hardware and software, process, applications and commitment of management activities to develop high quality of customer service, and customer's maintenance. However, the slight is known about how various activities may exert differentiated impact on organization the concerned. This paper's focus is to discuss the positive and negative impacts of electronics customer relationship management (E-CRM), as a marketing strategy for an organization. The paper further explains the behavior of consumers toward organizations and the emergence of electronic commerce that brought a positive change towards business in a global market.*

**KEYWORDS:** *electronics customer relationship management (E-CRM), consumer behavior*

### I. INTRODUCTION

Managing customer relationship has become one of the most important concerns for an organization. Appropriately, organizations are seeking for supplementary and effective relationship activities to increase organizational value of customer relationship by improving relationship quality or delivering better relationship benefits. [3] Electronics customer relationship management (E-CRM) is an important tool for measuring the performance of an organization in order to help the company to increase its profit and enhance customer loyalty towards the company product. [8] The performance of E-CRM has becoming a rising alarm in marketing and information technology research and practice. [9] Although the important basis of CRM has been around since 1956, it is within the last few years that CRM has generated an important impact in global business industries. It is a new process that comes from the internet and web technology to make the implementation of E-CRM easy and flexible. [10] The electronics customer relationship management concentrates on internet web-based interaction between service providers (organization) and customers. [11], [12] the most crucial advantage of CRM and E-CRM is to help the company to identify and categorize customer for enhancing their loyalty and generating profit (Rudolph 1999).

### II. CUSTOMER RELATIONSHIP MANAGEMENT (CRM)

Customer relationship management (CRM) starts off from new business practices that focus on how to manage customers, such as attracting new customers and retaining them. [13] Customer relationship management is a business strategy process that improves organization's competitive ability. It also creates a successful strategy for an organization which helps them to focus on customer's behaviors, promotes the emerging speed of firm and maintains their customers in a very highly competitive market environment. [14] The need to understand the consumer's behavior in various marketplaces is very important in electronic commerce. CRM deals with both customer and

employees. [15]. although its perspective is based on outside of an organization (i.e.) in marketplace and eyes of the consumers, CRM communication is a market communication, such as communication various types of relationship and consumer's behaviors. [16] Example is communicating the relationship that involved in business-to-business, customer lifecycles, various segments of consumers and their nature. It also communicates the consumer time value and profitability of consumers. [17]

### **III. IMPACT OF ELECTRONICS CUSTOMER RELATIONSHIP MANAGEMENT (E-CRM)**

Electronics customer relationship management (E-CRM) is an electronic commerce (marketing) approach used by organizations to enable them identify and draw customers that are potentially profitable.[18] This is done by developing proper relationship with customers and drawing them in a way that their future requirements will be satisfied. Practicing E-CRM system means developing an accurate image of customer requirements and behavior, [19], [30] E-CRM is one of the most developed managerial methods that can be utilized in any organization. It is one of the best approaches that organizations can use to attract and retain their consumers from switching to other companies in order to prevent customer churn. [20] E-CRM is the complete process and techniques that an organization has to gain, increase, and maintain in order to provide consumers with high quality service through the use of internet. As a result E-CRM is a flexible and more secure channel method to get high profitability, customer retention and maintenance of relationship with the customers in a convenient and effective manner. [21] E-CRM technology should be more advanced and erudite to meet the requirement for developing and knowledgeable customer, usage of CRM technology consistently has a strong impact on CRM performance (Greve and Albers, 2006), they propose that the more comprehensive the CRM technology is, and the higher the CRM technology usage, the better the CRM performance will be across the stages of customer life-cycle. The CRM technology creates a significant impact on the performance of customer relationship with an organization.[22]. According to Sheng [1], the primary objectives of customer relationship are the acquisition and retention of consumers, which leads to the bottom line of financial benefits. The CRM has started the recent years in order to become the central strategies for organizations that aim to provide information of understanding and meeting the needs of customers. [23] The rapid growth of the latest developments in internet-based technology encourages the development of electronic customer relationship (E-CRM), which allows many innovations in a relationship management, supply chain management, and inter-organizational collaboration [2] E-CRM is one of the most effective application of information system (IS).

### **IV. CONSUMER'S BEHAVIORS**

The American marketing research foundation defines consumer behavior as "the dynamic interaction of affect and cognition, behavior and the environment by which human being conducts the exchange aspects of their lives (Bennett, 1995). [33] This definition indicated that affect and cognition are significant aspect in understanding consumer's behavior. Affect and cognition are consumer psychological respond in various types of situation. A consumer is the final user of a company's product or service. Consumer behavior involves psychological processes that consumers go through for them to identify their needs. [32] as a result when trying to solve these needs, there is a need for making a purchase-decision (example is whether the consumer will purchase a product or not, if yes then which brand and where), interpret information, make the plans, and implement the plans by comparison on variety of product or purchasing a product.[24] Consumer behavior is crucial factor determines consumer's behavior and intention to accept or reject new information about a company's product. The cognitive dissonance theory states [3] that under normal circumstances, an individual's cognitive system is in behavior inconsistent, which will lead to create tensions and conflicts in the individual's mind, making he/she to change attitude or adjust behaviors.

## V. THE IMPACT OF E-CRM ON CONSUMER'S BEHAVIORS

The E-CRM system is built up from co-corporation of the new technology, such as the internet, telemarketing and email, with customer relationship management.[25] E-CRM is built for the business and marketing industries. Most organizations with a good E-CRM system implementation are moving towards more positive than negative impact.[26] An organization using E-CRM software system will be able to communicate with their customers and access customer information and history, and this will lead the organization to enhance its consumer's loyalty implicitly. [27] E-CRM provides organization with chances of understanding the consumer's future expectations level, which will provide the organization with a deeper look at the level of consumer satisfaction. Kotler [5] explains that satisfaction refers to a person's feeling of pleasure or disappointment that results from comparing an organization's products perceived performance or outcome in relation to his/her expectations. Satisfaction can be associated with feeling of acceptance, and happiness [6]. Factors that affect customer's satisfaction include friendly employees, knowledgeable employees, and accuracy of billing, billing timelines, competitive pricing quality, good value and fast service.(Hokason)[7] Other positive impacts of using E-CRM are improving customer service and providing support, efficient and encouraging cost reduction. [4] In addition E-CRM helps in collecting, updating and fulfilling orders remotely and accurately. [28] For any organization, this requires a long dating and maintaining process to retain the existing customers and attract new customers. [29] Organizations also use E-CRM as a tool for centralizing the entire customer's data into a single database storage and allow each department within an organization to exchange customer profile [31].

## VI. DISCUSSION

Across the surveys conducted by most experts, we conclude that the E-CRM system requires all the necessary consumer information that will describe the consumer's daily activities and the leisure activities to the organization. Such information includes the financial status of a customer, occupation, age and personal interest. This research shows that E-CRM has positive effects at the organizational level for their respective products and services, consumer's loyalty, efficiency, internal process, management channels and innovative sufficient account for E-CRM impact. The E-CRM technology and organizational support also have positive impact on E-CRM performance. Within the technological context, it is crucial for an organization to consider the E-CRM technology integration and customer information analysis. On the other hand (organizational context), E-CRM personal asset, consumer knowledge management (CKM), learning and sensing consumer market, appropriately account for the organizational support on good E-CRM. Competition intensity and consumer power in an environmental context should be put into consideration as well. Advanced technology and information provide organization with off-the-shelf software to better electronic system. Better understanding of how employees communicate with customers when facing a problem about the organization's product and services should also be put into consideration. As a result, qualitative and quantitative research about the organization and its product and services should conduct thoroughly from both the employees and consumer's perspective.

## VII. CONCLUSION

The E-CRM framework (impact) presented in this paper was addresses the current electronics business needs for an organization to become successful in a highly competitive electronic commerce environment. The study of consumer's behaviors in an electronic market and the factors that control the consumer's behavior towards organizational goals are also discussion in this paper. Consumer's perspective about organizational business model may have an impact on the result of a succeeding process of E-CRM. Other factors that influence the results of a successful E-CRM implementation are available there for other experts and/or researcher to recognize in the future.

## REFERENCE

- [1] Y.P. Sheng. A business model and framework for electronic customer relationship management. In Proceedings of the 8<sup>th</sup> AMCIS Conference. 2002.

- [2] A. Zornes and M. Gotta, Web & collaboration strategies. 2001, META Group Inc.
- [3] R.A. Feinberg, R. Kadam, L. Hokama, and I. Kim, The state of electronic customer relationship management in retailing. *International Journal of Retail & Distribution Management*, 2002. **30**(10), pp. 470 - 481.
- [4] Ahmed T. 2009, 'Electronic Customer Relationship Management in Online Banking', Master Thesis Electronic Commerce 2009:070.
- [5] Kennedy, A. 2006, 'Electronic Customer Relationship Management (eCRM): Opportunities
- [6] Hoyer, W. D. & MacInnis, D. J. 2001, 'Consumer Behavior', 2nd ed., Boston, Houghton Mifflin Company.
- [7] Hokanson, S. January 2, 1995, 'The Deeper You analyze, The More You Satisfy Customers', *Marketing News*, p.16
- [8] N.C. Romano Jr. and J. Fjermestad, Electronic commerce customer relationship management: An assessment of research. *International Journal of Electronic Commerce*, 2001. **6**(2), pp. 61-113.
- [9] A. Gaffney 2007, 'Improving Customer Satisfaction through More Effective ICT Strategies', *Alcatel-Lucent Enriching Communications Vol.1, Issue 2*, 2007
- [10] E-Customer Relationship Management: Training Module 2008, <http://www.mmv.vic.gov.au/Assets/219/1/ElectronicCustomerRelationshipManagement.pdf>, [Accessed on September 17, 2010]
- [11] Ahmed T. 2009, 'Electronic Customer Relationship Management in Online Banking', Master Thesis Electronic Commerce 2009:070.
- [12] Samsudin Wahab, Nor Azila Mohd Nor & Khaled AL-Momani 2010, 'The Relationship between E-Service Quality and Ease of Use On Electronic Customer Relationship Management (E-CRM) Performance: An Empirical Investigation In Jordan Mobile Phone Services', 2010 International Conference on e-Education, e-Business, e-Management and e-Learning, pp. 368-372.
- [13] Peter C. Verhoef 2003, 'Understanding the Effect of Customer Relationship Management Efforts on Customer Retention and Customer Share Development', *Journal of Marketing*, Vol. 67 (October 2003), pp. 30-45.
- [14] Scullin, S., Fjermestad, J. & Romano, N. C. 2004, 'E-relationship marketing: changes In traditional marketing as an outcome of electronic customer relationship Management', *The Journal of Enterprise Information Management*, Vol. 17, No. 6, pp. 410-415.
- [15] C.Y. Lim & Vincent Khoo 2010, 'Customer Relationship Management: Lifecycle of Predicting Customer Lifetime Value', Second International Conference on Computer Research and Development, pp. 88-92.
- [16] Colleen Cunningham & Il-Yeong Song 2007, 'A Taxonomy of Customer Relationship Management Analyses for Data Warehousing', Tutorials, Posters, Panels and Industrial Contributions at ER 2007.
- [17] Galbreath, J & Rogers, T 1999, 'Customer relationship leadership: a leadership and motivation model for the twenty-first century business', *The TQM Magazine*, Vol. 11, No. 3, pp. 161-71.
- [18] Huang Y. 2004, 'The new management things [M]', Beijing: Democracy and construction Press, 2004. (In Chinese).
- [19] G.C. Moore and I. Benbasat, Development of an instrument to measure the perceptions of adopting and information technology innovation. *Information Systems Research*, 1991. **2**(3), pp. 192-222.
- [20] H. Rosenbaum and B.Y. Huang, A framework for web-based ecommerce customer relationship management. In *Proceedings of the 8th AMCIS Conference*. 2002.
- [21] V. McKinney, K. Yoon, and F. Zahedi, The measurement of web-customer satisfaction: an expectation and disconfirmation approach. *Information Systems Research*, 2002. **13**(3), pp. 296- 315.
- [22] P.B. Seddon, S. Staples, R. Patnayakuni, and M. Bowtell, Dimensions of information systems success. *Communications of AIS*, 1999. **2**(Article 20).
- [23] Kabiraj, S., "Electronic Customer Relationship Management: Origin and Opportunities", *Engineering Management Conference, IEEE xplore*, Nov. 2004, pp. 484-488.
- [24] Khalifa, M.; Ning Shen, "Effects of Electronic Customer Relationship Management on Customer Satisfaction: A Temporal Model", 38th Annual Hawaii International Conference on Systems Sciences, Jan. 2005, pp. 171a - 171a.
- [24] T. Chang, L. Liao, W. Hsiao, "An Empirical Study on the e-CRM Performance Influence Model for Service Sectors in Taiwan", *Proceedings of the 2005 IEEE International Conference on e Technology, e-Commerce and e-Service, IEEE Xplore*, 29 March-1 April, 2005, pp. 240 – 245.
- [25] R. Feinberg and R.Kadam, "E-CRM Web Service attributes as determinants of customer satisfaction with retail Web sites", *International Journal of Service Industry Management*, 2002.
- [26] A. Dutta, "Managing Customer Turnover In Online Services: A Systems Thinking Approach", *International Conference on Information Systems*, 2000, pp. 681 – 687.

- [27] Z. Song, Y. Wang, B. Yu, Z. Zhang, "How Customer Relationship Creates Value", International Conference on Services Systems and Services Management, IEEE Xplore, June 2005, Vol.1, pp.144-150.
- [28] Greve, G. and Albers S. (2006). Determinants of Performance in Customer Relationship Management – Assessing the Technology Usage – Performance Link. Paper presented at the Proceedings of the 39th Hawaii International Conference on System Sciences - 2006. Article in a journal:
- [29] Wang, Y., Lo, H. P., Chi, R., & 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
- [30] D. Bradshaw and C. Brash, "Managing customer relationships in the e-business world: how to personalize computer relationships for increased profitability," *International Journal of Retail & Distribution Management*, vol. 29, pp. 520- 530, 2001.
- [31] Anderson, James C., "Business marketing: understand what customers value," *Harvard Business Review*, November-December, 1998, pg. 54.
- [32] Cunningham , S.M, *The Major Dimensions of Perceived Risk* , In F.C.Donald (Ed.) , *Risk Taking and Information Handling In Consumer behaviors*, [M], Boston: Harvard University Press, 1967:82-108.
- [33] Bennett, the American marketing Research Foundation, 1995, pg.59.

### Authors

**Usman Musa Zakari Usman** is a M.Sc. research student at the Faculty of Computer Science and Information Systems of University Technology Malaysia (UTM), Skudai, Johor Malaysia. He holds his B.Sc. in business Information Technology from Limkokwing University of Creative Technology Cyberjaya Malaysia (LUCT). His research interests are innovative solutions for "knowledge-based" information systems that span several areas applying ontology and knowledge management for interoperating information systems, software engineering and enterprise system.



**Abdullah Nabeel Jalal** is a M.Sc. research student at the Faculty of Computer Science and Information Systems of University Technology Malaysia (UTM), Skudai, Johor Malaysia. He holds his B.Sc. in Management Information System from University of Masul Iraq.



**Mahdi Alhaji Musa** is currently a Master Student in IT-Management at Faculty of Computer science and information system University Technology Malaysia, and working in the Department of Computer Science at the Yobe State University Damaturu-Nigeria. Mahdi holds a B.Eng. from Bayero University Kano Nigeria in Electrical Engineering. . His main research interests are innovative solutions for "knowledge-based" information systems that span several areas applying ontology and knowledge management for interoperating information systems, e-learning and M-learning.

