

A Framework for CRM E-Services: From Customer Value Perspective

Wei-Lun Chang and Yu-Xin Wu

Department of Business Administration, Tamkang University,
NO 151, Ying-chuan Road, Tamsui, Taipei County, Taiwan
wlchang@mail.tku.edu.tw, nick2581@yahoo.com.tw

Abstract. The global competition for enterprises has been the significant issue for recent years. However, the customer needs are difficult to satisfy due to specialized characteristic of existing customers. A good CRM strategy may assist firms to earn advanced profits, increase customer perceived value, and acquire new customers. This research aims to provide a holistic framework based on two dimensions. The first dimension is the level of customer needs which is related to customer perceived value. The second value is the process of CRM; for instance, attracting, interacting, and retaining customers. This paper intends to: (1) identify the level of needs based on perceived value, (2) recognize the possible step of CRM processes, and (3) recommend an appropriate CRM e-service to a customer.

Keywords: E-Service; Customer Value; Internet-Enabled CRM.

1 Introduction

The global competition for enterprises has been the significant issue for the past years. However, the customer needs are difficult to satisfy due to specialized characteristic of existing customers. Companies need to manage the relationships with customers more efficient than competitors. For example, firms can get closer to their customers by interactive communication and needs/habits identification and enhance the value of customer. The profitability of customers can also be increased through sustainable attracting, interacting, and retaining customers. Consequently, the key for enterprises is offer superior customer relationship management strategies.

Customer relationship management (CRM) is a significant issue for today's companies. In particular, a good CRM strategy may assist firms to earn advanced profits, increase customer perceived value, and acquire new customers. The popularity of information technology and Internet has changed the concept to deliver services over the Internet. Certain enterprises provide the opportunity to deliver services over the Internet, which is considered as a way to decrease service cost, tighten with customers, and furnish mass communication.

In this study, CRM is transformed from traditional CRM (face-to-face) to Internet-Enabled CRM (over the Internet). This paper defines Internet-Enabled CRM as conducting CRM by utilizing devices which can deliver e-services through the Internet.

The extent of Internet-Enabled CRM includes electronic CRM (E-CRM), mobile CRM (M-CRM), and ubiquitous CRM (U-CRM). The existing CRM framework is based mostly on the company's perspective; for example, it considers how to acquire customers, retain customers, and create profits from customers. Hence, a holistic framework for both sides is still lacking, especially for e-service industry.

Furthermore, Internet is also the major problem for e-CRM which cannot provide face-to-face contact and difficult to grasp customer needs. Hence, it is important to obtain customer needs accurately and interact with customers efficiently to put effort on valuable customers. This research aims to provide a holistic framework based on two dimensions. The first dimension is the level of customer needs which is related to customer perceived value. The second value is the process of CRM; for instance, attracting, interacting, and retaining customers. We believe each customer has different perceived value for a same service. That is, this paper intends to: (1) identify the level of needs based on perceived value, (2) recognize the possible step of CRM processes, and (3) recommend an appropriate CRM e-service to a customer.

The rest of this paper is organized as follows. Section 2 surveys the extant literature, such as customer perceived value and e-service. Section 3 devises a conceptual framework for customer value management. Section 4 provides the implications of the proposed framework, and section 5 provides a conclusion.

2 Background

2.1 Definition of Perceived Value

The definition of perceived value is proposed by Zeithaml [11], which indicates customer perceived value is the consumer's overall assessment of the utility of a product based on what is received and what is given. Kolter [5] specifies customer delivered value is the difference between total customer value and total customer cost. That is, the benefit of a specific product or service for a customer. The total value includes product value, service value, and personnel value and the total cost enfolds monetary cost, time cost, and spirit cost. Holbrook [1] defines customer value is interactive, experienced, relative, and favorable. This study considers customer value is the difference between obtaining and devoting and various from people.

However, why value is important? Companies attempt to create profit from their customers who evaluate the firms that can provide products or services to satisfy their value [5]. Consumers always consider value as the most important factor when they purchase the products or services. The value stands for what the customers obtain from the transaction. Yan [10] indicates customer value reflects consumer behavior and affects the order of needs. Kim et al. [4] specifies that needs emerge before attitude and purchase and can create value, trigger behavior, and satisfy required level of needs. Hence, the concept of customer value and customer needs is relative (see Fig. 1). Customer value is the obtained benefit from the perception of products or services. Customer need is the motivation to achieve goals that belongs to a type of spontaneous behavior. Hence, this research will utilize the concept of value to build the holistic framework in terms of customer perspective.

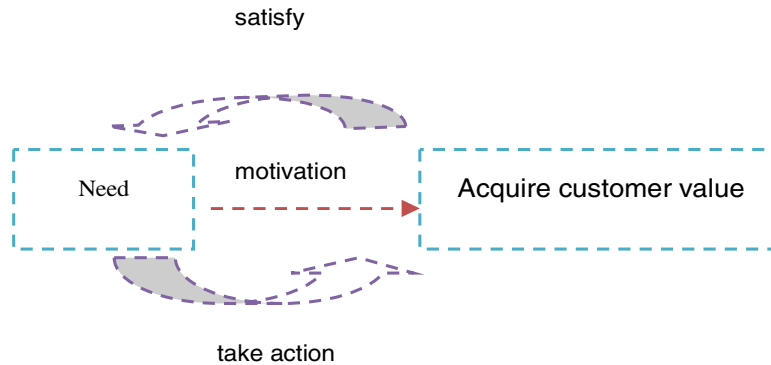


Fig. 1. Relationship between customer value and customer needs

2.2 CRM E-Service

Järvinen and Lehtinen [2] define e-service as a benefit providing object of transaction that can be characterized as an intangible process that is at least partially produced, marketed and consumed in a simultaneous interaction through electronic networks. The implement of e-business not only enhances the efficiency of business but creates markets and profit [7]. Meanwhile, e-services generate new service experience and customer value, such as functional value (time saving, convenience), emotional value (interaction), social value, and network value (security and privacy) [3][6].

In this study, we attempt to classify existing CRM e-services into four major components: attractive e-service, interacting e-service, analytic e-service, and retaining e-service. Attractive e-service provides e-services which employ marketing methods. For example, blog marketing, experience marketing, and 1-to-1 marketing are extremely suitable for e-services. The second component is interacting e-service, which allows firms and customers interact over the Internet. In this category, e-service providers can furnish post-purchase survey e-services, online responding e-services, and collected FAQ e-services. Post-purchase survey e-services allow firms to get a better understanding of their customers after purchase, and online responding e-service enables customers to obtain real-time answers when they have a problem.

The third component is analytic e-service, which is used to analyze customers through two main e-services: statistic analysis and data mining e-services. Statistic analysis employs conventional statistical approaches, like clustering and linear regression, while data mining employs artificial intelligence approaches, like neural networks and genetic algorithms, to analyze customers. Finally, retaining e-service includes customer segmentation e-service and performance measurement e-service. In this category, the aim is to help firms retain their customers. For example, customer segmentation e-service can assist firms to segment their customers, identify key value, and provide retaining strategies. Hence, this study will utilize the classification as the basis to build the holistic framework in terms of enterprise perspective.

3 A Conceptual Framework

3.1 A Value Cube for Internet-Enabled CRM

In the era of wireless technology, three dimensions of value are identified for Internet-enabled CRM: (1) business value, (2) customer perceived value, and (3) social value (see Fig. 2). Business value is generated from companies and is always represented by monetary value (e.g., profits). Firms can easily observe the changes in profit (customer profitability) for a given time period and can modify their CRM strategies accordingly. Customer retention another indicator with which to measure profits. According to the 80/20 rule, 20 percent of customers will generate 80% of a company's profits, so it is important to retain those customers. Internet-enabled CRM provides Internet-based e-services that customers can access anytime and anywhere, and companies can utilize new technologies (e.g., wireless and mobile devices) to help earn profits based on certain e-services, so Internet-enabled CRM is believed to attain high business value.

Customer perceived value is generated by customers and reflected in their willingness to pay. The concept of willingness-to-pay represents how much customers intend to pay for furnished e-services, and different CRM strategies may result in different behaviors of customers. For example, customers will not pay for the e-services which are inappropriate for them, even if they are delivered. Internet-enabled CRM provides opportunities for customers to acquire the most appropriate e-services when they face problems, and the technology helps companies identify customers' information, such as location, personalized preferences, and behaviors. Thus, Internet-enabled CRM can help attain high customer perceived value.

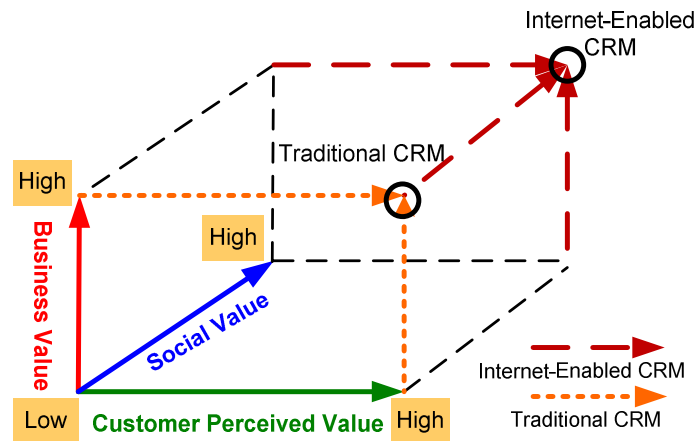


Fig. 2. A Value Cube for Internet-Enabled CRM

Social value is generated by collective intelligence—the wisdom of crowds—over the Internet. According to certain theories (e.g., Delphi method, brainstorming), group decision-making is superior to individual decision-making. Internet-enabled CRM allows peers to assist each other in solving problems based on wireless technologies

(e.g., agent-based approach). Traditional CRM merely allows firms to decide what services to deliver—a one-way delivery concept—but Internet-enabled CRM allows peers from the social network to collaborate to decide what e-services will be furnished right away. Thus, Internet-enabled CRM is believed to attain high social value.

In short, Internet-enabled CRM facilitates high business value, customer perceived value, and social value in our proposed value cube. Traditional CRM may attain high business value and customer perceived value, but it lacks a social network effect in the e-service delivery process. We believe Internet-enabled CRM is superior to traditional CRM in terms of collaboration for Internet-enabled services. Hence, Internet-enabled CRM is expected to extend social value dimension from low to high and to provide complete solutions for managing customers well.

3.2 A Value-Based Model for Internet-Enabled CRM

This research uses the dimensions of customer value and CRM process of e-services to propose a customer value creation model (CVCVM), which is also a value-based model for Internet-enabled CRM. Wooddruff [9] separates customer value into level of attribute, end, and goal from information processing perspective. Level of attribute describes the products or services, level of end indicates the interaction of users and products/services, and level of goal specifies the goal of individual or organization. Sheth *et al.* [8] indicate the determinants of customer decision for consuming value which are functional value, social value, emotional value, cognitive value, and conditional value. The existing literature specifies the significance for separating customer value into several levels. The lowest level of customer value is concrete and the highest of customer value is abstract. All levels of customer value are interconnected and the higher level of customer value needs to be satisfied from lower level of customer value. In this research, we synthesize the existing concepts to classify customer value into self-actualized value, social and emotional value, added value, and functional value.

In Fig. 3, we utilize customer value and CRM e-service process as two major dimensions to construct a customer value creation model. The lowest two levels of customer value are functional and added value which enfold the concept of CRM 1.0. In the past, CRM 1.0 allows merely closed or one-way communication which indicates only firms can decide when to communicate with customers or not. In these two levels, customers desire to accept useful e-services with basic functions and certain extended e-services to obtain added value. For example, customers need Google to help them search some information and guide them to the related websites. These two levels of customer value are based on basic and expectant value. Companies need to provide e-services that the customers perceive usefulness and completeness to fulfill their needs.

The third level is social and emotional value, which is enhanced to CRM 2.0 concept. CRM 2.0 allows value co-creation and is a type of two-way interaction. In this level, companies provide e-services that fulfill customers' desired value and perceived belongingness from customers. The effect of word-of-mouth can be applied in this level. The most important to firms is the satisfaction of social and emotional value that can retain and create more customers. The highest level is self-actualized value


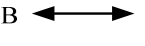
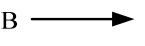

Concept	Pre-Sale Transaction Post-Sale			
	←-----+-----→			
Process for Creating Customer Value	Acquire	Use	Feedback	Retain
Process for Creating Business Value	Marketing	Sale	Post-Service	Revise
CRM E-Service Process				
Level of Customer Value	Attract	Interact	Retain	
Surprise from customers (CRM 3.0 concept: Self-problem solving and self-control) Self-actualized value (Unexpected Value)	Products and services provide self-actualized value.	Customer-centric radiation 	Customer domination	
Satisfaction from customers (CRM 2.0 concept: Value co-creation from social network) Social and emotional value (Desired Value)	Products and services provide belongingness.	Two-way interaction 	Social and emotional satisfaction	
Comprehensiveness from customers (CRM 1.0 concept: E-service standard) Added value (Expectant Value)	Products and services are comprehensive.	One-way communication 	Completeness	
Usefulness from customers (CRM 1.0 concept: Basic functions of e-services) Functional value (Basic Value)	Products and services provide functional value.	Closed 	Perceived usefulness	

Fig. 3. Customer value creation model

which is also the expected value to customers. In this level, customers expect surprises from companies and the concept is promoted to CRM 3.0. CRM 3.0 allows customers to solve problems on their own and furnish suggestions and comments for improving e-services sustainably. The customers play a vital role to provide much valuable information to enterprises, which is also the concept of customer-centric radiation. In this level, customers dominate the process of CRM and help the companies to retain most of their customers and create profits.

4 Implications

4.1 Customer-Centric Management

This paper provides a new perspective for CRM in terms of motivation and value. Different customer background may result in various levels of needs and perceived value. Companies need to differentiate marketing methods according to different targets. Our proposed framework provides the opportunity to identify customer needs and furnish a combination of CRM e-services in time. In addition, we assist firms to identify psychological perception from customer value. Enterprises can earn more profits from the concept of customer-centric management.

4.2 Collective Wisdom Empowerment

The proposed framework allows customers to collaborate in order to release the power of collective wisdom. Collective intelligence (wisdom) refers to the concept that people can contribute together in order to attain good performance of Internet-Enabled CRM. Our framework can assist companies to identify the level of needs for customers and predict what CRM e-service(s) can be delivered for the next step.

4.3 Real-Time E-Service Composition

Real-time e-service composition is also a significant issue for Internet-Enabled CRM. E-service providers should be aware of what customers really want at any time, based on their needs. Even when e-service providers acquire customer needs, they still have to compose the required e-services and deliver them to the customer quickly. Certain e-service providers can discover required e-services from the framework more efficiently and dynamically bundle them as a package. Our framework advances the e-service delivery process and implements the concept of service-oriented management.

5 Conclusion

CRM is an essential issue for companies in recent years. The emergence of e-services has been changed the essence of traditional CRM services. CRM e-services will dominate future CRM processes. This study proposes a value cube for Internet-enabled CRM in terms of business value, social value, and customer perceived value. The value cube also illustrates the revolution of CRM. In addition, this research investigates the significance of customer value to provide a different perspective for CRM process. Thus, we propose a value-based model for Internet-enabled CRM e-services. This paper extends the concept of customer value from Maslow needs hierarchy based on existing literature. In particular, we separate customer value into four levels: self-actualized value (highest), social and emotional value, added value, and functional value (lowest). The fulfillment of customer value may be caused by different combination of CRM e-services. Hence, we aim to provide a holistic framework for future CRM e-service providers with customer and business perspectives.

Moreover, there are still some limitations for this research. For example, the proposed value cube and value-based model need to be verified in details. Real-world cases or simulation of collected data can examine the feasibility and validity. Although the proposed frameworks are novel and preliminary, the value is existed for further investigated. The other limitation is the separation of level of customer value. We extend the concept from Maslow needs hierarchy to construct our framework. However, some other concepts that can separate the level of customer value are existed. The different separation of levels can be applied to compare the difference between our model and others. In sum, we believe our proposed model/framework is crucial and potential for future CRM studies. Additionally, the contribution will be significant if the real-world cases are applied in details.

References

1. Holbrook, M.B.: *Consumer Value: a framework for analysis and research*. Routledge, London (1999)
2. Järvinen, R., Lehtinen, U.: Services, e-Services and e-Service Innovations Combination of Theoretical and Practical Knowledge. In: Marko, S., Mika, H., Anne-Mari, J., Johanna, K., Mikko, R., Tarja, T. (eds.) *FeBR 2004 Frontiers of e-Business Research 2004 e-Business Research Center, Tampereen yliopiston laitosten julkaisut*, pp. 78–89 (2004)
3. Keeney, R.L.: The Value of Internet Commerce to the Customer. *Management Science* 45(4), 533–542 (1999)
4. Kim, J.-O., Forsythe, S., Gu, Q., Moon, S.J.: Cross-cultural consumer values, needs and purchase behaviour. *Journal of Consumer Marketing* 19(6), 481–502 (2002)
5. Kotler, P.: *Marketing Management-Analysis, Planning, Implementation and Control*, 9th edn. Prentice-Hall Inc., New Jersey (1997)
6. Korgaonkar, P.K., Wolin, L.D.: A multivariate analysis of web usage. *Journal of Advertising Research* 39, 53–68 (1999)
7. Rust, R.T., Kannan, P.K.: *e-Service: New Direction in Theory and Practice*. M.E. Sharpe, Armonk (2002)
8. Sheth, J.N., Newman, B.I., Gross, B.L.: Why We Buy What We Buy: A Theory of Consumption Values. *Journal of Business Research* 22, 159–170 (1991)
9. Woodruff, R.B.: Customer Value: The Next Source for Competitive Advantage. *Journal of the Academy of Marketing Science* 25(2), 139–153 (1997)
10. Yan, O.H.M.: *Consumer Behavior in China: Customer Satisfaction and Cultural Value*. Routledge, New York (1994)
11. Zeithaml, V.A.: Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence. *Journal of Marketing* 52, 2–22 (1988)