

A FRAMEWORK FOR ANALYZING CUSTOMER VALUE OF INTERNET BUSINESS

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ABSTRACT

The main objective of this paper is to investigate the customer value of the Internet business. Internet business can be viewed as a new way of value creation and provision. Internet business makes it possible for firms to create and provide higher or new values for a range of customers wider in scope than in conventional business. For this reason, customer value plays an important role in the success of the Internet business.

A new framework is developed to analyze and evaluate customer value in the Internet business. The framework is comprised of value components and value improvement directions. Customer value can be created and/or enhanced by changing two components: the “content” and “context”. The value improvements of both can be achieved by quality enhancement, cost reduction, and customization. Measurements to assess customer value are derived from this framework. We also further propose the exploratory alternatives for creating or enhancing customer value in the Internet business on the basis of this framework.

The framework of this paper can be used to analyze and evaluate customer value effectively and completely in various Internet businesses. It also can be used to compare the level of customer value among businesses on the Internet.

INTRODUCTION

The term of “Internet Business” is rarely seen in academic journals but widely used in the practical world. Instead, Electronic Commerce (EC) as “a new way of doing business on the electronic communication network” (ESPRIT 1997) has been broadly used to designate the Internet business. “EC” and “Internet business” are similar concepts in that both of them mean the business that actively utilizes the Internet as a business medium.

We define Internet business as *a new way of business that utilizes the Internet as a medium for transactions with customers*. According to this definition, the Internet business encompasses most of the businesses that utilize digital network as transaction media with customers as well as “selling and purchasing of products and services over the Internet” (Keeney 1999).

Internet business as a new way of Value Creation. Various views can be applied to Internet business. Electronic markets where Internet business takes places can reduce the buyers’ cost associated with conducting transactions (transaction cost) and also reduce perceived complexity of products and asset specificity. And it has been argued to alleviate market imperfections, and result in more efficient markets (Malone et al. 1987; Malone et al. 1989; Bakos 1991). The Internet business also allows the market to expand and helps firms capture new business opportunities. A variety of new business opportunities have emerged for firms conducting business over the Internet.

The Internet business can also be viewed as a new way of creating and providing value for the customer. Firms can create value for customers in a manner that is different from that which has been achieved in conventional business. Value creation and provision in the Internet business can be performed differently from the conventional business (Rayport and Sviokla 1994).

This research focuses mainly on the third perspective and regards Internet business as a new way of value creation and distribution. From this point of view, business

on the Internet is important due to its potential in terms of the creation and provision of value for the customer, which is higher than in conventional business. That is, it can enhance, create, and distribute value to a wider range of customers.

This highlights the importance of Internet business strategy based on customer value. Decisions such as selection and development of business models and website construction and its operation, and other tasks should be made based on the value for the customers. The business on the Internet should focus on the value for the customers not solely on the technology or products (Xue and Harker 2000).

Assessing Value for the Customer. As customer value becomes important in Internet business, research on customer value and its assessment is required. Little research, however, directly addresses the issue of customer value. Other related research on customer value (e.g. Jarvenpaa and Todd 1997; Keeney 1999) cannot be directly applied to analyzing customer value for the various types of Internet business.

This paper attempts to investigate the customer value of the Internet business, and propose a framework that can be used to analyze and evaluate the customer value of various types of Internet businesses. The framework describes the components and the directions for improvement of customer value by integrating the previous research that has been undertaken in fragments. The framework can be used to diagnose the current status and determine the future direction of business strategies from the perspective of customer value.

The remainder of this paper is organized as follows: in section 2, various kinds of research on the question of customer value are reviewed. In particular, the concept of customer value and the factors affecting customer value are investigated. In section 3, we derive the framework that describes the value components and value improvement directions of Internet business. Measures for evaluating customer value are developed in section 4. We present the exploratory alternatives to creating or enhancing customer

value in Internet business on the basis of this framework. Summary and areas of future research are addressed in the last section.

PREVIOUS RESEARCH ON CUSTOMER VALUE

The Concept of Customer Value. A business has been viewed as “the processes composed of value-adding activities”, and the output of firms’ activities are considered “value to the customer”. The value created by a firm can be measured by the amount that customers are willing to pay for it. A business is profitable if the value it creates exceeds the cost of performing the value activities (Porter 1985).

We define the customer value of Internet Business in terms of *the benefits the customer derives from transactions made through Internet business in terms of reducing costs*. The cost includes all the money, time, and efforts required to gain the benefits. From this standpoint, customer value can be enhanced either by increasing benefits or by reducing cost required for obtaining the benefits.

This definition is slightly different from that of Porter(1985)’s in that it covers costs as well as benefits. This definition is similar to the concept of value proposition that characterizes “the combination of end-result benefits and price to a prospected customer from purchasing a particular product” (Keeney 1999). In the marketing area, perceived value is most commonly described in terms of the relationship between price and value (Dodds 1991). The value perceived by a consumer is usually determined by quality relative to price (Mackay 1999). If a consumer perceives a product to be of good quality and it is of relatively low price compared to a competitor’s product, it is considered good value for money.

Factors that affect customer value. Little research directly addresses the factors affecting customer value. We could find factors from similar research concerning how customers’ satisfaction or attitude was affected, or the characteristics affecting website success. It is based on the assumption

that customer value is directly related to customer satisfaction or Internet business success.

Jarvenpaa and Todd (1997) derive four main groups of factors that affect customers’ attitudes towards on-line shopping, such as product perception (price, quality, and variety), shopping experience (effort, compatibility, and playfulness), customer service (responsiveness, assurance, reliability, tangibility, empathy), and consumer risk (economic risk, social risk, performance risk, personal risk, privacy risk). Ghosh (1998) lists convenience, information, personalization, and interactivity as the real value of the Internet. Margherio et al. (1998) argue that customers shop on the Internet because of choice, convenience, better and more complete information, lower prices, and personalization. Keeney (1999) develops a list of the values that can be used to maximize customer satisfaction in Internet commerce, logically categorizing them into means and fundamental objectives, and indicates their relationships. Huizingh (2000) develops a framework for analyzing and categorizing the capabilities of websites, which distinguishes content from design. Liu and Arnett (2000) identify four factors that are critical to website success in EC, information and service quality, system use, playfulness, and system design quality.

Characteristics of previous researches. Previous research has the following characteristics:

First, they are performed on specific and restricted factors rather than customer value. The factors affecting customers’ attitude or behavior (Jarvenpaa and Todd 1997, Keeney 1999), or the characteristics that affect the website success (Huizingh 2000, Liu and Arnett 2000) can also be regarded as factors concerned with customer value. However, customer values are affected by the overall characteristics of Internet business as well as the related product or website. To address this problem, a comprehensive framework needs to be developed to encompass various aspects of customer value.

Second, most research focuses on restricted business such as shopping mall or Internet commerce. Keeney (1999)’s

proposition, for example, is that a product's characteristics determine the value of the product (Kauffman and Walden, 2001). In a while, Internet business includes various businesses such as matching services (auction, couple matching, job matching, etc), information providing, on-line services (banking, stock trading, game, music, e-mail etc.) as well as product sales (shopping mall). The results of previous research can hardly be applied to these diverse businesses. The research should be expanded to consider the various types of businesses that offer information, services, and products. In addition, the framework should be applied across the various business models.

Third, there is no consistency in the results and it is not explicitly explained why these factors are important for customer value. This is due to the fact that the results are derived from an open-ended survey (Jarvenpaa and Todd 1997; Keeney 1999), synthesis of previous research (Liu and Arnett 2000), or observation on the practices (Ghosh 1998; Margherio et al. 1998), not from a systematic analysis based on the framework. For example, Keeney(1999)'s vector of product characteristics which were discovered from a consumer survey, are hardly supported on a theoretical basis in terms of why they are fundamental. Only the customers' response can explain it, and in the future the characteristics may change. A systematic approach is needed to create a framework considering customer value from various angles and derive factors from the framework.

THE CUSTOMER VALUE FRAMEWORK

In this section, we propose a systematic approach to create and improve the value for the customer by deriving the customer value framework of the Internet business. Comparative analysis with previous research and detailed description of the framework follows.

The customer value framework that explains the value schemes of Internet business consists of two dimensions: value components and value improvement directions. While the value components define the constituent of customer value, the value improvement

directions define ways and means for improving customer value. The former describes "what constitutes the value for the customers?", while the latter describes "how value for the customer can be created or improved?". This framework can assess and analyze the value for customers completely and effectively by considering both "what" and "how".

Few researchers explain the customer value in this way. However, they implicitly assume that customer value can be assessed and analyzed by considering the components and improvement directions. The factors of Jarvenpaa and Todd (1997), for example, can be interpreted that customer values are composed of product, service, shopping experience, and consumer risk, and they can be improved both by increasing quality, variety, playfulness, service quality and reducing price, inconvenience, and risk. Liu and Arnett (2000)'s four factors consider only value components.

Value components

The framework of this research divides the values for the customer into *content value* and *context value*. While the content value refers to 'the generic benefit offered from the content of the transaction', the context value means 'the additional benefit offered from the subsidiary functions and/or characteristics of the transaction'. The term "context" is borrowed from Rayport and Sviokla (1994) who define the context in which the transaction occurs as "how companies are offering content". They consider context as one of the basic elements of value proposition (pp.145).

Values from content and context constitute the total value for the customer. Firms can enhance or create customer value by changing either content or context of the transaction. By creating the more valuable contents or providing the contents in a more valuable way firms can provide higher value to the customer. In other words, the things they purchase or the way things are purchased and delivered can increase the value for the customer.

From this point of view, Jarvenpaa and Todd (1997)'s two factors, i.e. product perception and shopping experience, can be viewed in terms of content value and context value. Huizingh(2000)'s distinction between content and design is similar to our framework, but we analyze the "context value" more broadly than "design".

Content value. Content value means the benefit offered to the customer through the contents they purchase. Content can be products, services, or information that are offered at the Internet business sites (Huizingh 2000). Many of the Internet business sites offer most of them. The content value can be enhanced more easily with information and services rather than with product, and with digital offerings rather than with physical ones, owing to the flexibility of reconfiguration and modification.

Context Value. Context value refers to the benefit offered to the customer through the factors other than generic offerings. Even with the same content, customers can benefit different kinds of value in the process of acquisition or its delivery, which describes the context value. While content value means the generic benefit from the offerings, context value means the contingent values that are offered in the transaction process. While content value appeals to logical reasoning, the context value appeals to the emotional response.

The context value can be added by differentiating the ways of transaction. Attractiveness of website, convenience, and ultra-selection can be the examples of context value to the customer. The importance of context value increases where there is no significant difference in content value, i.e. a commodity market. Context value can be more easily increased with digital offerings than physical offerings because these can be delivered in a variety of ways in the digital network.

Why values are divided into content and context? Dividing the value into content and context means that the customer can benefit from the both the outcome and the process of the transaction. This is supported by a lot of previous research. Silk and Kalwani

(1982) suggest that fairness and ease in the order process are significant factors that affect consumer satisfaction. This means that satisfaction with the order process heavily influences the consumer's overall satisfaction. Davis (1989) hypothesizes the two constructs, perceived usefulness and perceived ease of use, to be fundamental determinants of user acceptance of information technology. Customer value of IT can be affected by the characteristics of its acquisition and usage process as well as IT's fundamental usefulness. Zeithaml et al. (1990) show that customers do not evaluate service quality based solely on the outcome of the service, but also on the quality of the service delivery process. This supports our framework that value is composed of content and its transaction and delivery process, i.e. context. DeLone and McLean (1992), in their "IS success model", point two dimensions of information system quality, which affect user satisfaction: system quality and information quality. System quality, which can be defined as the degree of how well the system responds, is similar to context value. Information quality, which focuses on the output of the information system, is also similar to the content value of Internet business. Keeney (1999)'s list of fundamental objectives affecting customer service also can be classified into content (product quality, cost) and context(time to receive product, convenience, time spent, shopping enjoyment, privacy, safety). What really makes a difference to the customer is how the products and the associated services are delivered (Xue and Harker 2000). Huizingh (2000)'s framework for analyzing the websites distinguishes content from design. It can be seen that customers can benefit from the both content and design of the websites. The design of websites can be considered the major constituent of context value.

Value improvement directions

Customer values, both content and context can be added or increased in various ways. We derive three directions of value improvements: quality enhancement, cost reduction, and customization.

Quality has been considered a major factor affecting customer value (e.g. Jarvenpaa

and Todd 1997). Customer value can be enhanced by raising quality control standards. Cost, however, has not been explicitly viewed in terms of its value improvement direction. Even though a website might provide good quality content, it is considered of low value for customers if the related cost is relatively high compared to the quality (Mackay 1999). Conversely, reducing the costs can enhance the value for customers. In this line of reasoning, we argue that both enhancing quality and reducing cost can increase the values for customers. While quality enhancement has a positive effect on the value, the cost reduction plays a role in decreasing the negative effects on the value. Customization can be another way of increasing customer value (Ghosh 1998, Margherio et al. 1998). As different customers may view the value of the same purchase very differently (Keeney 1999), customization becomes the important directions enhancing the value for customers.

Quality Enhancement. Quality can be defined as the superiority or excellence of the content or transaction. The quality of both content and context can be the target of value improvement. While quality of content is determined by the characteristics of offerings, quality of context is determined by the manner of transaction and delivery. By differentiating

the characteristics of the offerings or transaction, firms can improve the value for customers.

Cost Reduction. Customer value should be analyzed with respect to the cost required to perform transaction as well as the benefit from the offerings themselves. Cost refers to the degree of efforts required to gain the offering, which includes time, inconvenience, uneasiness and inconvenience as well as money. Cost is incurred from both content and context. While the cost related to content manifests directly to the customers, the context related cost exists implicitly and becomes an obstacle to the success of the Internet business. By reducing or removing various cost factors in terms of content and context, one can increase customer value.

Customization. Customization means improving customer values by increasing the degree to which an offerings or way of transaction meets the individual requirements or tastes of the customer. As customers are different in their needs, customization that focuses on individual requirements is the most substantive way of improving customer value because offerings targeted at the common requirement of the average customers cannot satisfy all of them.

		Value Component	
		Content	Context
Value Improvement	Quality Enhancement	(1) Content Quality: <i>Enhancing benefits from the content.</i>	(2) Context Quality: <i>Increasing the benefits derived in the process of the transaction.</i>
	Cost Reduction	(3) Content Cost: <i>Reducing sacrifices directly required to obtaining the content.</i>	(4) Context Cost: <i>Decreasing cost from the process of transaction.</i>
	Customization	(5) Content Customization: <i>Differentiating the content of the transaction</i>	(6) Context Customization: <i>Providing personalized transaction environment</i>

Figure 1. The Customer Value Framework.

Customization is satisfying each customer's desire by changing the content and context to meet the individual delicate requirements. Customization of products and services is perceived as business advantage on the Internet (Jarvenpaa and Todd 1997). Business on the Internet has more ability to customize its offerings than does the traditional business (Xue and Harker 2000).

The customer value framework

The two dimensions of the value framework lead to the following six factors affecting customer value. Evaluation of customer value for a specific Internet business can be performed through the customer value framework and its six factors as shown in Figure 1.

Characteristics of the Framework.

The framework proposed in this paper offers greater opportunity for the analysis of customer value. It supersedes previous research that has been done in parts.

First, it can explain and analyze customer value in a comprehensive way. The framework of this paper considers both "how" and "what" of the customer value. This can provide a complete list of factors that affect customer value. Differences among previous research on customer value may arise from the absence of a systematic framework that allows for a comprehensive analysis and explanation. This framework has the power to assess customer value thoroughly.

Second, it can be applied to various types of business on the Internet. There exists many types of business models on the Internet, and more diverse business models are expected to appear in the near future. As we have noted before, most previous research on customer value or related topics focuses on Internet commerce or the websites themselves. For this reason, the results of previous research cannot be directly applied to any general kinds of businesses. The framework of this paper explains the factors that affect customer value from the perspective of general Internet business, not just the specific business model such as Internet shopping. For this reason, it

can be applied to most of the current and future Internet business models.

Lastly, the framework is useful for explaining the differences in customer value among business models. As the framework is derived from the general business model, it can be used to compare the customer value across the business models. In this case, the weight of six factors can be different for business models or customer groups. Six factors of customer value from our framework can also be used to explain and analyze the value focus of specific or even diverse business models. For example, in matching services such as couple making, context cost is considered most important, while content and context quality is the most important in game services.

Comparison with previous research.

The framework of this paper can be used to include and reinterpret the various results of previous studies.

Factors affecting customers' attitudes towards on-line shopping (Jarvenpaa and Todd 1997) are divided into content value (product perception) and context value (shopping experience, consumer risk). Each of the "price" and "quality" factors of the product is equivalent to content cost and content quality. The variety of products is considered context quality rather than content quality because it offers the customer the privilege of selection rather than a benefit derived from the content. Both factors of the shopping experience, i.e. 'effort' and 'playfulness', correspond to convenience as context cost and playfulness apply to context quality. Compatibility with the consumers' lifestyle and shopping habits should be considered customization. Customer service is excluded from the major factors because it is regarded as a composite factor that affects both content and context value. In the case of a shopping mall, customer service can be regarded as context value, but it is desirable that services represent the overall offerings of the Internet business in some cases.

Smith (1997) proposes a set of criteria for evaluating Internet information sources. These criteria also can be classified into content-related (scope, content, cost, purpose

and audience, reviews) and context-related (graphic and multimedia design, workability).

The framework can also be used to interpret the set of fundamental objectives (Keeney 1999). Content value includes product quality (content quality), cost and time taken to receive the product (content cost). The objectives of convenience, time spent, privacy, and safety, are interpreted as constituents of context cost, while shopping enjoyment is

related to context quality. Keeney does not explicitly address customization and attractiveness. The means objectives are not directly considered representative of customer value because these are not in themselves what customers want but rather implements that help to achieve other objectives. The decisions about purchasing can be made with only the most fundamental objectives (p.535).

Table 1. Comparison of the customer value criteria with the previous researches.

		Jarvenpaa and Todd (1997)	Smith (1997)	Keeney (1999)
Quality Enhancement	Content	Product quality	Scope Content	Product Quality
	Context	Playfulness, Variety	Graphic & Design	Shopping enjoyment
Cost Reduction	Content	Price	Cost	Cost, Time to receive product
	Context	Effort Risk	Workability	Convenience Time spent
Customization	Content	Compatibility	N/A	N/A
	Context		N/A	N/A

Services can be one of the major contents provided to the customer in Internet business. Among various frameworks, SERVQUAL (Parasuraman et al. 1988) has been widely used to measure the quality of service, which defines the five dimensions of service quality, i.e., reliability, responsiveness, assurance, empathy, and tangibles. Tangible, which is defined as “appearance of physical facilities, equipment, personnel, and communication materials”, can be applied to Internet business with slight modifications, like website quality. Empathy, which refers to “the caring, individualized attention the firm provides for its customers”, is similar to customization, especially in terms of context. Responsiveness, “the willingness to help customers and provide prompt service”, can also be applied to Internet business as a component of context value. On the other hand, assurance, i.e. “knowledge and courtesy of employees and their ability to convey trust and confidence” and reliability, which is “the ability to perform the promised service dependably and accurately” can be interpreted

as constituents of the content value of Internet business.

MEASUREMENT OF CUSTOMER VALUE

The customer value framework can be used to evaluate the degree of value offered to the customer and to derive the value creating and enhancing alternatives in an Internet business firm. In this section we develop measures for assessing customer value from six factors of customer value framework.

Content quality

Content quality refers to the benefits gained from the content of the transaction. Content of an Internet business can be its products, services, or information. Depending on the offering, enhancing content quality can be made on product, service, or information. As many of the Internet business firms provide customers with a composite type of content, a set of criteria applicable to most types of content can be derived

The benefit derived from the content is determined by the usefulness of the content, and this is applicable to most contents regardless of their type or business model. The usefulness can be evaluated in terms of the intrinsic value of the content as well as its quality. How the content is represented is another important determinant of the content value.

Providing sufficient additional information is an important benefit to the customer in Internet business (Margherio et al. 1998). In this paper, additional information as well as additional service is regarded as a significant factor in enhancing the usefulness of content.

Usefulness. Usefulness means the degree to which the customers achieve their objective through the content. Usefulness of the content can be determined from the various characteristics of the content. Specific criteria for measuring usefulness vary depending on the type of content: product quality, service quality, or information quality. In any case, usefulness of the content should be measured compositely with both the main offering and additional information and services. In the case of information, usefulness can be determined by its richness (Evans and Wurster 1997), or by accuracy, timeliness, and relevance (Ahituv 1980).

Representational Quality. The definition of representational quality is the degree to which content is featured as a means of helping customers achieve their goals more efficiently with the content. Even with the same content, value can be different depending on its presentation. Representational quality includes detail and accuracy of information about content (Xue and Harker 2000), and representational relevance.

Context quality

Context quality refers to the additional pleasure that can be derived from the process of transaction. This is similar to the concept of the shopping experience (Jarvenpaa and Todd 1997) or the shopping enjoyment (Keeney 1999). Context quality is determined by the pleasure of the transaction environment and

the transaction itself. Pleasure from a transaction environment is determined by the characteristics of an Internet business site. Pleasure from the transaction is affected by additional playfulness and the variety of content.

Attractiveness. Attractiveness refers to the characteristics of a website that attract the interest of customers or make them “not bored”. Attractiveness is increased when the Internet business site provides customers with a comfortable and pleasant transaction environment. It is similar to the “tangible” of the SERVQUAL model (Parasuraman et al. 1988), site atmosphere (Jarvenpaa and Todd 1997), and website aesthetics (Xue and Harker 2000).

Playfulness. Playfulness refers to the benefits derived from the pleasures offered to the customer in addition to the main offerings. As Hoffman and Novak (1996) argue, the web should provide the consumer with a fundamentally different shopping experience. Shopping experiences such as playfulness are identified as one of the factors affecting shoppers’ behavior in Internet shopping (Jarvenpaa and Todd 1997). Jokes, cartoons, pictures, games, video clips, and various other entertainment services can help the firm give playfulness to the customer (Huizingh 2000).

Content Variety. Content variety refers to the assortment or range of contents available from an Internet business site (Jarvenpaa and Todd, 1996). It helps customers find their choices dramatically increased (Margherio et al 1998).

Content variety can be viewed in two perspectives, the number of items, and the number of alternatives of the same items. An Internet business site, for example, that deals with many items such as books, clothes, travel information, and dating services can provide customers with the benefit that “many things can be done in one place”. Other sites deal only with book, but most of the books can provide customers with the pleasure of choice and selection. Content variety in this paper can be applied to the latter. The former can be viewed as content scope, and the characteristics of the business model such as

composite shopping mall versus special shopping mall.

Content cost

Content cost refers to the degree of sacrifice directly required to obtaining the content. Price and freight charge play an important role in the content cost. Low price, which is viewed as particularly important in the Internet business (Jarvenpaa and Todd 1997), enhances the value for customers by reducing the cost of content.

Price. Price refers to the total monetary cost to the consumer to purchase a good or service, including various transaction costs such as shipping (Jarvenpaa and Todd 1997). Lower price is regarded as one of the important benefits of Internet business (Margherio et al. 1998; Keeney 1999). It can be mainly achieved by the characteristics of digital goods that can be easily transformed to enhance value and reproduced at lower additional costs (Shapiro and Varian 1998) or by the characteristics of digital media.

Table 2. The Measurement of the Value for Customer.

Value Improvement	Value Component	Measures	Description
Quality Enhancement	Content	Usefulness	Intrinsic excellency of the content
		Representational Quality	Representational relevance
	Context	Attractiveness	Aesthetics of the website
		Playfulness	Additional enjoyment factor
		Content Variety	Assortment or range of contents
Cost Reduction	Content	Price	Lower price and freight charge
		Delivery time	Accuracy and quickness of delivery
	Context	Convenience	Ease of access, usage, and transaction
		Reliability	Safety from various risks
Customization	Content	Customized offering	Providing the customized content.
		Price customization	Imposing the right price for the content.
	Context	Site customization	Differentiating the characteristics of the website.
		Transaction customization	Supporting different forms of transaction.

Delivery time. Delivery time refers to the time elapsed until the customer obtains the offerings from a transaction. Delivery time can be the important determinant of context cost especially in the transaction of a physical product. Customer value can be increased when the content purchased is delivered accurately, comfortably, and on time.

Context cost

Context cost refers to the costs or sacrifices required to the customer in the transaction process. The cost includes time, inconvenience, and uneasiness.

Inconvenience of doing business can be considered the major cost related to the context. One way to solve this problem is to maximize the convenience of transaction.

Transactions occur without direct interaction between parties involved in the transaction on the Internet, and this causes customers' uneasiness toward the transaction. Another way of reducing the cost related to context can be to resolve the uneasiness of transaction by providing customers with assurance and reliability. Security and payment can be the prerequisite for ensuring a successful transaction. They can also cause customer uneasiness and increase the context cost.

Elimination of inconvenience and uneasiness can play a major role in the context value. Customer value can be increase as one enhances convenience and assures reliability.

Convenience. Convenience, which means the degree of easiness in the process of transaction, is similar to the "easy of use" in IT quality evaluation (Davis 1989). It is akin to minimizing efforts (Jarvenpaa and Todd 1997). Convenience is often found to be the most important determinant in Internet business (Hoffman and Novak 1996; Jarvenpaa and Todd 1997).

Convenience is related to the physical base and the transaction. Physical convenience means how easily and quickly one can access and use the site. Convenience in the transaction means that transaction requires minimum efforts and assures time saving

(Margherio et al. 1998). It can be applied to all the phases of transaction from search, selection, order placement, payment, and delivery to after sales support (Jarvenpaa and Todd 1997).

Convenience can be facilitated through a variety of features such as a site's URL, access speed, hardware performance, easy and effective search engine, efficient navigation design, consistent website design, and various functions related to supporting transactions (Green and Browder 1998).

Reliability. Reliability refers to the degree of safety from the risk that may arise at an Internet business site. Removing or reducing uneasiness which is inherent to the Internet, can increase reliability of the Internet business site.

Customer unease is caused by a third party as well as the business firm itself. It also includes the economic risk, social risk, performance risk, personal risk, and privacy risk (Jarvenpaa and Todd 1997).

Reliability can be achieved by providing the additional information or comment of other customers who have experienced the offerings. It can also be achieved with detailed answers to potential questions from customers. Uneasiness of the customer can be decreased when they are provided with the explicit statement of secure transaction from the offering firms or previous experience of the transaction. For this reason, customers should be encouraged to post experiences of their own purchases or transactions. Brand awareness and image can be effective tools to solve the uneasiness from the indirect transactions.

Content customization

Content customization refers to differentiating the content to meet individual needs. Content customization can be applied to the price of the content as well as the content itself.

Customized offering. Customized offering refers to providing the content by transforming it to meet individual customer needs. This can be applied mainly to digital

goods such as information and services, especially with dynamic content created by programs or scripting language based on user requests (Xue and Harker 2000). Digital goods can be transformed diversely with little additional cost (Shapiro and Varian 1998). Customers benefit by obtaining the exact content they want, and this increases customer value.

Price customization. Adequate price of the content may vary depending on the economic value or practicality of the content to the individual customer. Price customization means imposing the right price for the content tailored to the individual requirements of the customer. It includes price differentiation, diverse delivery options.

Context customization

Context customization refers to providing a personalized transaction environment that fits the individual preferences of the customer. Customization of context includes the nature of the website and the manner of transaction. Performing transaction in a personalized environment and with personal preferences can increase customer value.

Site customization. Site customization means differentiating the characteristics of the website to the personal preferences of the customer. Targets of site customization include menu lists, site configuration, navigation process, and atmosphere of the site. For instance, site customization can be achieved by allowing customers to reconfigure the menu list according to their tastes. The decoration or atmosphere of the site can be customized to increase customer value.

Transaction customization. Transaction customization means supporting different forms of transaction that fits the individual needs of the customer. It can be applied to all the stages of transaction such as search, order, payment, and delivery. Personalized recommendation, flexibility of payment means (Xue and Harker 2000) can be examples of transaction customization.

CONCLUSION

Conclusion. A customer value driven strategy is the important direction for creating a successful Internet business. The purpose of this study is to develop the framework for analyzing and explaining the value to the customer. The framework consists of two dimensions: the value components and value improvement directions. Customer value is composed of content and context. The former refers to the generic value given to the customer by the offerings themselves and the latter refers to the additional values that are gained in the process of transaction and delivery. Each of the value components can be improved in three ways: quality enhancement, cost reduction, and customization.

The framework can be used to explain and analyze customer value completely because it considers both “how” and “what” of the customer value. It can also be applied to most types of current and future Internet business models.

How can customer value be created or improved? The framework can provide practitioners with a way to create and improve customer value. A few examples are presented.

The characteristics of a website play an important role in enhancing customer value, especially in terms of context value. Well-designed websites, for example, give customers a sense of the “attractiveness” of the transaction. Entertainment factors can improve the “playfulness” of context quality. In addition, consistent structure and efficient navigation can offer customers a “convenience” factor in terms of context cost. In this way, the direction of website design can play an important role in improving customer value.

While brand name and brand loyalty contribute to high customer value, they can adversely affect customer value. Although customer value can be evaluated objectively, customers are inclined to perceive them subjectively. For this reason, the brand name can increase the perceived value for the customer. Quality of the content such as “usefulness” cannot be evaluated exactly. Customers regard the quality of the content of

famous brands quite highly. The “reliability” of context cost also depends highly on the brand name. Customers generally cannot estimate exactly the risk factor of firms on the Internet. For this reason, they assume that a firm with a famous brand name can instill considerably more faith.

Development and selection of business models is an important in Internet business and it also affects customer value significantly. The offerings of the Internet business, which are determined by the business model, are an important determinant of content quality such as “usefulness”. The business that deals with a wide range of contents such as a composite shopping mall can give customers high value in terms of “content variety”.

Customer acquisition is an important goal of Internet business. Enticing many customers can play a significant role in increasing customer value. Similar to the brand name, firms with many customers are considered relatively “reliable”. It can also enhance the content quality. In the case of matching services, where network effects exist, the “usefulness” of the content increases as the number of customers increases. In this case, increasing the number of customers can enhance customer value.

Contribution, limitation, and further research area. One of the major contributions of the customer value framework is to address the direction of customization. Many researchers agree that customization is an important characteristic of Internet business and it can enhance customer value fundamentally (Ghosh 1998; Liu and Arnett 2000). There exists little research on the directions or specific mechanisms of customization. This paper describes the four directions of customization (customized offering, price customization, site customization, and transaction customization) that can give practitioners or researchers a starting point for customization. Empirical verification on the direction and the correlation with customer value is a potentially useful topic of research.

Customization, one of the directions of customer value improvement, can affect both quality enhancement and cost reduction. In

other words, customization plays a role in enhancing quality and reducing costs at the same time. For example, site customization also increases the “playfulness” and “convenience” of transaction. Customization can be viewed as an overlapping construct of both. It can be located in the sub factors of quality enhancement and cost reduction.

The framework of this paper is devised to be applicable to various types of business models. The weight pertaining to each factor can be different depending on the type of business model. Applying the framework to specific businesses on the Internet and addressing the differences among business models can be an important task of research.

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