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The Relationship of Online Customer Value, Satisfaction, and Loyalty: An Empirical Study

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Abstract

In this study, we propose a three-component customer value model for ecommerce. This model draws upon the literature in marketing, consumer study, and information systems. It decomposes customer value into process value, outcome value, and shopping enjoyment. This three-component model is parsimonious and comprehensive. The results from this study show that outcome value and process value contribute significantly to customer satisfaction. Evidences also suggest that customer satisfaction affects loyalty. Enjoyment, however, has no significant positive impact on customer satisfaction. Explanations are presented in discussions and implications.

Keywords: Online customer value, outcome value, process value, enjoyment

1. Introduction

Despite its newness, e-commerce is revolutionizing many aspects of the transactions between consumers and firms (Hoffman 2000). This revolution has resulted in a need to understand consumer behaviour online because of the enormous impact from the use of IT and its consequential impact on market success (Straub and Watson, 2001).

A key aspect of online consumer behaviour is the understanding of customer value perceptions. Customer value is a customer's perceived net benefits in a specific situation (Woodruff 1997). For the past two decades, in consumer behaviour research, customer value has been recognized as a key predictor of customers' product choice (Zeithaml 1988), channel preference (Keeney 1999), and store choice (Anckar et al. 2002). Further, it is also advocated as a strategic variable for achieving competitive advantage (Lapierre 2000). However, despite the importance of customer value in traditional marketing research, little has been written about the meaning of customer value as well as its roles in the ecommerce context.

Online customer value differs from its offline counterpart. While offline customer value is mainly determined by product (e.g. Zeithaml 1988), in online retailing settings, not only the product, but also the online store and the Internet channel can affect customer value (Keeney 1999). Though product value is relatively well understood in literature, the added value from the use of Internet channel and store specific effort online is rarely studied. Moreover, the impact of different aspects of the customer value on a company's online performance is unclear. Therefore, the research questions of this study are to 1) present a clearer understanding of online customer value by examining its key components; 2) study its impact on company's online performance from a relational marketing perspective.

2. Conceptual Foundations

In order to understand customer value online, we start with a review of customer value in the offline context. We then examine the special nature of online shopping. Based on that, we synthesize the three components of customer value online, and provide theoretical perspectives to support the three-component model.

2.1 Product Value

One critical aspect of customer value is obtained through the product purchased. Product value is a much interested concept in the marketing literature, and is conceptualized in so many different ways (Woodruff 1997). Table 1 synthesizes these definitions.

Table 1. Concepts of customer value

Reference	Definition/concepts of value
Anderson and Narus 1998, p54	Value in business markets is the worth in monetary terms of the technical, economic, service, and social benefits a customer company receives in exchange for the price it pays for a market offering.
Butz and Goodstein 1996, p.63	By customer value, we mean the emotional bond established between a customer and a producer after the customer has used a salient product or service produced by that supplier and found the product to provide an added value.
Carothers and Adams 1991, p.34	The value realized by a customer which justifies the sacrifice made to acquire, use, and dispose of a product/service set which customers perceive as superior to all others in providing what is expected, after considering alternatives and the required sacrifice.
Chen and Dubinsky, 2003, p.326	A consumer's perception of the net benefits gained in exchange for the costs incurred in obtaining the desired benefits.
Ghosh 1994, p.7	The value that a retailer creates for its customers depends on two factors: the utility of the retailer's products and services, and the price the customer has to pay for those goods and services. (Utility is the benefit or worth of the retailer's offering as perceived by the customer)
Holbrook 1999	An interactive relativistic preference experience.
Lapierre 2000, p.123	The customer-perceived value can be defined as the difference between the benefits and the sacrifices (e.g. the total costs, both monetary and non-monetary) perceived by customers in terms of their expectation, i.e. needs and wants.
Porter 1985, p.3	What buyers are willing to pay.
Sweeney et al.1999, p.88	The consumer's perception of the product's price compare to other brands of the same product with similar specifications.
Woodruff 1997, p.142	A customer's perceived preference for and evaluation of those product attributes, attribute performances, and consequences arising from use that facilitate (or block) achieving the customer's goals and purposes in use situations.
Zeithaml 1988, p14	Value is the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given.

Though the above definitions vary in many aspects, the core of product value is clear. First, product value involves a trade-off between what the customer receives (e.g. quality, benefits, worth, utilities) and what she gives up to acquire the benefits (e.g. price, sacrifices) (Woodruff 1997). Therefore, value perception refers to the perceptions of *net benefits* (e.g. Carothers and Adams 1991; Keeney 1999, Lapierre 2000; Woodruff 1997). Second, product value is a *customer's subjective perception*, as oppose to an objective one or one from the seller's perspective (Woodruff 1997). Even though the seller or manufacturer might "design" or "create value" in a product, the idiosyncratic use situation plays an important role in shaping value perception (Woodruff 1997). Finally and most importantly, the majority of above definitions in fact have a focus on product or core service (e.g. Butz and Goodstein 1996; Carothers and Adams 1991; Ghosh 1994), although a broader definition has been advocated by Zeithamal (1998). In a narrower sense, product value is equalized to customer value. With same essence, the term "value for the money" and "value for price" were used to describe product value (e.g. Hutcheson and Moutinho, 1998).

A narrow definition of customer value with a focus on product value alone is not appropriate because it might overlook some other important value components that customers base their decision on. We therefore define customer value as an overarching concept that encompasses all the benefit and cost incurred in a purchase instance. The broader definition subsumes not only product value, but also shopping value as will be discussed later. A broader definition of customer value is advocated by other researchers as well (Chen and Dubinsky, 2003).

Nevertheless, product value is a critical variable to explain customer's product satisfaction and choice behavior. For example, product value is found to be important to customer satisfaction and loyalty (Andreassen and Lindstad 1998; Cronin et al. 2000; Fornell et al. 1996), store patronage intention (Baker et al. 2002) and behavior (Bolton and Drew, 1991; Cronin et al. 2000), and purchase intention (Doods et al. 1991; Sweeney et al. 1999). From the seller's perspective, product value is therefore an important variable in retaining customers, because it has a direct impact on customer satisfaction and loyalty, which are the two key variables in relational marketing (Morgan and Hunt, 1994).

2.2 Shopping Value

Although product value prevails in the marketing literature, shopping value is also recognized. As early as in 1970s, Tauber (1972) noticed that people's shopping motivation is not only related to the obtaining of products, but also the benefits coming with the shopping activities. For example, people shop as an escape of daily work, to learn new trends, to take it as an exercise, and to just "watch people". Shopping value is defined as the evaluation of a shopping experience with a store (Babin et al. 1994), with a focus on the *process* of obtaining the desired products, rather than the products themselves. Offering shopping value to customer is claimed to be critical to the patronage behaviour (Babin et al. 1994). However, study on shopping value offline is scant.

Shopping value and product value differ in a critical aspect. While product value takes product as unit of analysis, shopping value looks at a retailing outlet. How can a retailer offer better shopping value in addition to the product quality and price? Studying shopping value can potentially offer differentiation strategy other than the price/quality competition. For example, based on environmental psychology, store environment has been identified as such a tactic variable to compete for customers (refer to Parasuraman et al. 2002 for detailed treatment). Other means to offer shopping value includes parking convenience, location (Arnold et al. 1983) etc.

Shopping value is particularly important in the ecommerce. First, online competition is less based on product quality, because most online products are standard products. The GVU survey in 1998 showed that the most popular products are software, book, hardware, and music. Such products are easy to describe, and require no personal inspection. Competition on such product is less likely to be quality based, but rather price based (Malone et al. 1987). To avoid excessive price competition, some other differentiation strategies, such as offering better shopping value through customization, are called for. Second, according to the GVU survey, there are more people using Internet for education and entertainment than for shopping. Educating customers on product subject, providing entertaining product related information, and building virtual communities are some ways to increase shopping value (e.g. Wine.com, HP.com and Babycenter.com).

2.3 Customer Value in Ecommerce—A Three-component Model

Although product value and shopping value have been identified in marketing research, an integrated conceptualization of customer value is still missing. The literature on offline shopping (table 1) dominantly focused on product value. In contrast, a review of online customer value reveals a bewildering mix of factors, spanning from lower level website system design factors (e.g. Childers et al. 2001; Davis et al. 1992) to product related information (e.g. Keeny 1999; Shim et al. 2002). To better picture the customer value online, a parsimonious and theoretically sound framework is in need.

To fill this gap, we propose a three-component model which breaks the customer value into *outcome value, process value, and enjoyment value*. The outcome value refers to the value of product/service provided by a web store to meet the customer’s needs and wants (Sheth et al. 1999). To a large degree, it corresponds to the product value. However, we term it as outcome value to avoid the confusion that product value does not include service outcome. The process value is defined as the saving of time and effort associated with the process of finding, ordering, and receiving product through a specific web store. The shopping enjoyment refers to the extent to which the shopping experience with a web store is perceived to be enjoyable in its own right, apart from any performance consequences that may be anticipated. However, by shopping enjoyment, we do not mean a simultaneous measure of the psychological state of a person during the shopping process, but rather the *enjoyability* of a store. Process value and enjoyment together correspond to the shopping value in the marketing literature. However, we distinguish them because they have different theoretical property and may lead to different managerial implications, as will be discussed later.

Why do we propose such decomposition? It is first rooted in the prior empirical studies of computer and web usage behaviour. Table 2 identifies the different factors in prior research that could affect the three value components we proposed.

Table 2. Factors that affect the three value components online

Reference & Field	Outcome	Process	Enjoyment
Alba et al. 1997. Marketing		Security, transaction cost, product screening, decision making support	Social interaction, entertainment
Chen & Dubinsky, 2003. Marketing	Retailer risk, product price	Valence of experience	Valence of experience
Childers et al. 2001.	Usefulness	Ease of use	Enjoyment

Retailing			
Davis et al. 1992. IS	Usefulness	Ease of use	Enjoyment
Devaraj et al. 2002. IS	price, usefulness	Time, ease of use, SERVQUAL,	
Gefen. 2002. IS		SERVQUAL	
Keeney. 1999. IS	Product quality, obtaining cost, environment impact	Time to get product, convenience to, safety find/buy/service the product, privacy	Shopping enjoyment
McKinney et al. 2002. IS		Information quality, system quality	
Srinivasan et al. 2002. Retailing	Cultivation (desired email promotions), choice (of products)	Customization, contact interaction (communication facilities on the website), convenience (ease of use), care (customer support)	Community
Szymanski & Hise. 2000. Retailing	Product offerings (number and variety), financial security	product information (quantity & quality), site design (cluttered screen, search path, speed), convenience (shopping time, convenience, ease of browsing)	
Teo et al. 2003. IS		Effectiveness, efficiency	Satisfaction

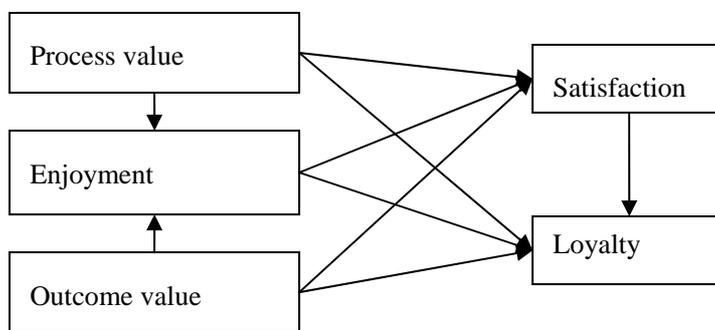
Table 2 offers a rich array of variables that are considered important to online shopping. Though the above classification is not meant to be precise, a clear pattern emerges that a retail website should be able to provide superior outcome, process, and enjoyment value to customers.

Not only does the three-component model reflect prior studies, it is also consistent with a few theoretical perspectives. First, the attitude psychology conceptualize attitude as having both cognitive and affective component (e.g. Perloff 1993). Rajeev and Ahtola (1985) posit that the utilitarian aspect of an attitude toward behaviour relates to usefulness, value, and wiseness of the behaviour as perceived by the consumer; on the other hand, hedonic aspect relates to pleasure experienced or anticipated from the behaviour. Applied this concept in customer value researches, utilitarian consumer behaviour has been described as ergic, task-related, and rational, and hedonic value is more subjective and personal and results more from fun and playfulness than from task completion (Babin et al. 1994; Hirschman and Holbrook, 1982; Childers et al. 2001). In the product consumption literature, it is now well established that product has both utilitarian value and hedonic value (e.g Hirschman 1984; Hirschman and Holbrook 1982; Holbrook 1999). Likewise, in the shopping literature, as Babin et al. (1994) summarizing it: some people shop so that they can buy; others buy so that they can shop. In the IS literature, use of computer also provides both utilitarian and hedonic value, which Davis et al. (1992) call them the intrinsic and extrinsic value. In our model, the enjoyment of online shopping at a website is the construct to reflect the hedonic value. The outcome value and process value embody the utilitarian aspect.

Second, the three-component model is consistent with the means-end perspective. Keeney (1999) postulates that customer value includes both the net value of a product and the net value of the process to find it in online shopping context. The component values in the process and outcome forms a hierarchy with some being the means to obtain others which are the ends. Keeney (1999) listed ten end values, which were reduced to four by (Torkzadeh and Dhillon, 2002), i.e., shopping convenience, Internet ecology, customer relation, and product value. Our model further considers shopping convenience and customer relation to be instances of process value, and the product value is a type of outcome value. We believe shopping process is a means to ends, which can be the outcome value or enjoyment. As Tauber (1972) summarizes, people are involved in a shopping process either to obtain product, or to just enjoy the process and fulfil their psychological need.

In summary, the three-component model is consistent with both the current ecommerce empirical studies and some theoretical perspectives.

Figure 1 Proposed research model



3. Research Model and Hypotheses

In order to empirically verify the three-component customer value model online and its importance to ecommerce success, we propose the above research model (Figure 1).

3.1 Relationship among Different Value Components

Utilitarian values can affect the hedonic value. Based on cognitive balance theory, Ahtola (1985) predicts that hedonic and utilitarian aspects are normally positively correlated. Put it plainly, one cannot be happy with something that is useless. In addition, from means-end perspective, affective consequences are believed to be in the higher abstract level than functional consequences, because the affective consequences are more strongly related to consumers' end needs, goals and value (Claeys et al. 1995). Such relationship between utilitarian and hedonic value has been reported in IS literature; functional qualities are perceived to have a positive effect on enjoyment, since they represent sources of information relevant to feelings of self-efficacy, competence, and self-determination, which are theorized to influence the intrinsic motivation (Davis et al. 1992). In study of people's experience in hypermedia, enjoyment, as a measure of flow, is the result of website's functional characteristics (Hoffman and Novak, 1996). Hence, we hypothesize that:

H-1a: Shopping process value is positively related to shopping enjoyment.

H-1b: Shopping outcome value is positively related to shopping enjoyment.

3.2 Customer Satisfaction

From a system user's perspective, satisfaction with a system is considered as one of the most important measures of IS success (DeLone and McLean, 1992; Seddon 1997; Rai et al. 2002). From a consumer's perspective, Bailey and Pearson (1983) state that "satisfaction in a given situation is the sum of one's feelings or attitudes toward a variety of factors affecting that situation" (p.531). In marketing research, "few things are as fundamental to the marketing concept as the notion of satisfying the needs and desires of the consumers" (Spreng et al. 1996, p.15). Satisfaction is thus an important measures of online customer overall feelings and attitudes.

The relation between process and satisfaction is supported by equity theory (Woodroof and Kasper, 1994). Equity is the result of an individual's evaluation of her inputs and rewards in comparison to another's inputs and rewards (Locke and Latham, 1990). In online shopping context, if a store requires more effort to find and order a product than other stores, then it would be perceived as unnecessarily difficult to use, and hence low process value. Such perception fails the expectation of online shopping convenience and reduces satisfaction. Similarly, failure to offer comparable product/service value will lead to dissatisfaction with the online shopping experience.

In addition, satisfaction is affected by the belief that one has exhaustively searched the set of acceptable alternatives such that there is no regret regarding a missed opportunity (Gilovich and Medvec, 1995). Online shopping provides the potential for a more extensive search than that which customers could accomplish in a store (Alba et al. 1997).

We therefore hypothesize:

H-2a: Shopping process value is positively related to customer satisfaction.

H-2b: Shopping outcome value is positively related to customer satisfaction.

H-2c: Shopping enjoyment is positively related to customer satisfaction.

3.3 Customer Loyalty

The high cost to attract new customers on the Internet and the difficulty in retaining them make customer loyalty an essential asset for many online vendors (Gefen 2002). Engel and Blackwell (1982) define brand loyalty as "the preferential, attitudinal and behavioural response toward one or more brands in a product category expressed over a period of time by a consumer." Assael (1982, p.87) define brand loyalty is "a favourable attitude toward a brand resulting in consistent purchase of the brand over time". Applying brand loyalty concept to store loyalty, Zeithaml et al. (1996) suggests that loyalty implies customer's intention to do more business with the seller and to recommend the seller to other customers. In online shopping context, Srinivasan et al. (2002) defines e-loyalty as "a customer's favourable attitude toward the e-retailer that results in repeat buying behaviour".

Classic strategic thinking (e.g. Porter 1985) advocates rising switching costs to retain customers. In online store, there are at least two approaches to using technology to induce switching costs. First, a website can remember facts about the customer that reduce the effort of future transactions. Second, a site can learn about the customer so that future interactions are tailored to the customer's needs, which is likely to create higher switching costs (Straub and Watson, 2001). In both cases, better process value is provided to the customer. Better product quality and lower price are surely among the traditional strategies to retain customers, as they provide better outcome value.

Past studies have indicated that customer value (outcome, process, and enjoyment) can be an important determinant of online customer loyalty (Eighmey and McCord 1998; Koufaris 2002; Srinivasan et al. 2002). Therefore we hypothesize that:

H-3a: Shopping process value is positively related to customer loyalty.

H-3b: Shopping outcome value is positively related to customer loyalty.

H-3c: Shopping enjoyment is positively related to customer loyalty.

3.4 Customer Satisfaction & Loyalty

Customers are loyal because they are satisfied and thus want to continue the relationship (Andreassen and Lindestad, 1997; Fornell et al. 1996). In marketing domain, Yi (1990) reviews past customer satisfaction literature and concludes that customer satisfaction influences purchase intentions as well as post-purchase attitude. Although it is not our focal interest, following the marketing literature, we hypothesize that:

H-4: customer satisfaction is positively related to customer loyalty.

4. Research Methods

In order to test the proposed model, a survey research was conducted. Instrument to measure the three value components was developed by reusing the existing items in the literature as much as possible. Minor revisions were made when appropriate. The sources of the items, as well as the items reliability, were indicated in Table 4.

Both graduate students and working people were invited to participate in the survey. 86 valid questionnaires were returned by subjects who had prior online purchase experience. They were asked to list up to three online stores that they have purchased before. Out of the stores they enumerated, one is chosen randomly as the target company, and a survey questionnaire is filled out. The whole process is done through a survey website in a self-administered way. Subjects were given SD\$10 as a reward.

5. Data Analysis

5.1 General Statistics

The demographics of the subjects are reported in table 3. Overall, our subjects are typical online shoppers who are well educated and with sufficient Internet experience.

Table 3. General statistics

Gender	Male: 61%	Female: 49%
Age	Mean: 26.6	Std:2.3
Internet Experience	Mean: 6.17	Std:1.465
Education	Bachelor: 34.5	Master: 65.1
Frequency of online shopping within one year	Mean: 2.59	Std:1.375

5.2 Instrument Validity

Exploratory factor analysis (EFA) was conducted to test the instrument's convergent and discriminant validity. Table 4 reports the EFA result with principal component analysis and varimax rotation using SPSS. We found a five-factor structure with eigenvalues greater than 1.0. The internal consistency reliability is measured by Cronbach's alpha with a 0.7 guideline value suggested by Nunnally (1997). The alphas for each constructs were reported in Table 4.

In summary, based on the data presented in two tables, we conclude that the scales of our study show adequate validity and reliability.

Table 4 Factor analyses for construct validity

Variables, Reference, and alpha	Measures	Factor Loading				
		LOY	ENJ	SAT	PRO	OUT
Satisfaction (Oliver and Swan, 1989) (.923)	unhappy --- happy	.259	.216	.768	.347	.037
	contented --disgusted	.222	.102	.879	.168	.254
	dissatisfied – satisfied	.321	.215	.817	.144	.294
Outcome (Childers et al. 2001) (.940)	Find a good deal	.257	.145	.248	.145	.876
	Save money	.166	.045	.173	.139	.930
Process (Davis 1989) (.923)	make my shopping less troublesome	.300	.152	.193	.863	.109
	make my shopping process more effective	.337	.148	.194	.850	.080
	make my shopping more efficient	.238	.349	.284	.696	.287
Enjoyment (Babin et al 1994) (.872)	Time spent on this web site was truly enjoyable.	.105	.769	.171	.304	.073
	Shopping on this web site was a very nice time out	-.010	.885	.116	.194	.077
	This web site immersed me in exciting products it offers	.164	.877	.033	.149	-.088
	I enjoyed this web site for its own sake, not just for the items I may have purchased	.206	.746	.186	.108	.249
Loyalty (Gefen 2002) (.841)	do most of my future travel arrangement with this website	.887	.100	.197	.204	.151
	recommend this store to friends, neighbours, and relatives	.793	.176	.127	.289	.122
	use this store the very next time you need to shop	.881	.100	.219	.217	.111
	arrange more than 50% of my shopping with this web site	.822	.128	.303	.182	.248

5.3 Hypotheses Testing

Using Structural Equation Modelling, we test the hypotheses in LISREL 8.5. Five indices used to estimate the model fit is higher than the standards recommended by the literature (Chi-square=119.32, $p=0.00$, Chi-Square/DF=1.49, NFI=0.91, NNFI=0.96, CFI=0.9, RMSEA=0.76). Another two indices, GFI=0.84 and AGFI=0.77, were also close to the recommended standard, though a bit low. Considering the sample size, our model is reasonably acceptable to assess the results. The result of hypothesis testing is reported in table 5.

Table 5 Hypotheses testing results

Hypothesis	Coefficient	T-value	P-value	Result
H1-a: Process → enjoyment (+)	0.45	3.72	0.000	Supported
H1-b: Outcome → enjoyment(+)	0.19	1.82	0.072	Rejected
H2-a: Process → satisfaction(+)	0.32	2.94	0.004	Supported
H2-b: Outcome → satisfaction(+)	0.39	3.88	0.000	Supported
H2-c: Enjoyment → satisfaction(+)	0.18	1.72	0.089	Rejected
H3-a: Process → loyalty(+)	0.44	3.99	0.000	Supported
H3-b: Outcome → loyalty(+)	0.17	1.83	0.071	Rejected
H3-c: Enjoyment → loyalty(+)	0.064	0.63	0.530	Rejected
H4: Satisfaction → loyalty(+)	0.33	2.88	0.005	Supported

6. Discussion and Implications

In this study, a three-component online customer value model has been proposed. Their impact on customer satisfaction and loyalty has been tested. Most of the causal relationships between the constructs postulated by our model were supported, accounting for 0.51 of the variance in customer satisfaction and 0.58 of variance in customer loyalty respectively.

Our empirical test provides evidence for the appropriateness of the decomposition of online customer value. These three components capture different benefits an online consumer can obtain from an online store. However, some hypotheses were not supported. Contrary to our expectations, enjoyment did not lead to customer satisfaction and loyalty. One explanation might be the product involved in the purchase. We found a large portion of our subjects bought less “hedonic” products, such as phone card. It is less likely to expect such websites to be enjoyable. However, further research is needed to better explore the role of enjoyment in other scenarios. Outcome was also found to be non-significant to loyalty. Notice that most of our subjects’ products are standard and small ticket products, it is therefore reasonable to measure outcome value in terms of monetary savings. However, price alone does not seem to be a good mechanism to build online loyalty if we assume customers are price seeker when buying standard product. Consequently, the outcome value does not seem to affect the loyalty. However, outcome value might be important when products are more important to the buyer. Enjoyment is also non-significant to satisfaction. Again, that might be due to the nature of the product.

Some serious limitations must be admitted before we discuss the implications. First, we have only a small sample. The generalizability of the result is questionable. Second, only standard products were bought by our subjects. A richer variety, or conversely, a strictly controlled

product, will surely offer more reliable picture. Our study, therefore, should be treated as an exploratory one on this topic.

With these limitations in mind, to the research community, this study 1) provides support for a parsimonious conceptualization of customer value, 2) verifies the theoretical viability of the three-component model, and 3) demonstrates the usefulness of the customer value on the bottom-line of ecommerce performance, and 4) opens a window for future research to find tacit mechanisms to improve customer values. To the practitioners, this study shows that offering process value to customers can be a sharp competition tool. In contrast, mere price competition might win customer's satisfaction, but not loyalty. However, placing stress on which component of customer value is contingent on the product type. A wise combination of the values can be an effective online differentiation and competition strategy.

7. Conclusions

In this study, we propose a three-component customer value model for ecommerce. This model draws upon the literature in marketing, consumer study, and information systems. It is intended to be parsimonious and comprehensive. The limited exploratory empirical test shows the three-component value model is viable. It also shows that customer value can have substantial impact on the bottom-line of online competition. Future studies that considers product as a contingent variable is required.

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