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Marketing mixes for digital products:

A study of marketspaces in China

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Abstract: *There is an increasing attention for studying marketing mixes for electronic products and services. It has suggested in the literature that none of established marketing models, including 4P, 4C and 4S, is appropriate for digital products in digital marketspace. In order to evaluate suitability of marketing mixes for digital products, three criteria are suggested in considering great differences in product properties, transaction space and transaction process. We investigate the suitability of three marketing mix models for each category of digital products in digital marketspace in this paper. We examine 45 marketing tools for digital products in China. By studying within the framework of the three established marketing mixes, we have three interesting findings. First, the trialability of digital products correlates significantly with its promotional tool's quantity. Second, depending on the category of digital products, the three established models have a varied suitability. Third, different digital products have different levels of suitability in distributional channel according to their delivery mode.*

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Keywords: digital marketspace; marketing mixes; digital products; E-business; network economy; criteria; classification; distributional channel; emprical study; marketing tools

1 Introduction

The rapid growth of the Internet and other emerging information technologies has created numerous opportunities and innovations for electronic markets and the new economy (Lindemann and Schmid, 1998). With wider bandwidths and peer-to-peer technology, a new vista is available for the on-line distribution of digital products. A new web-marketing space comes forth as more and more enterprises engaged in digital products business (Guo and Sun, 2004). Many digital products, such as digital music, software, and digital photo, have been produced and are being advertised and sold over the Internet. It was reported that listening digital music and downloading software are among the most popular applications (Tu and Lu, 2006). Although the growing popularity of CD burning and illegal song swapping has caused on-line music sales to tumble, total sales of digital music still reached $545 million through the third quarter of 2002 (Harris, 2002). The figure tripled in monetary value compared to the sales in 2004 (IFPI, 2006). Chinese software sales in 2005 reached $49.8 billion (390 billion Chinese Yuan), among it 53% are sale for software products and 47% for software services (Chinalabs, 2006). The growing popularity of selling digital products as a major profit-making endeavor has led business executives and academic researchers to explore the optimal marketing strategies involved in selling these products (Hui and Chau, 2002).

The purpose of this study is to develop a deeper understanding of marketing mix for digital products with an emphasis on using established marketing strategies into online marketspace. Specifically, the goal of this research is try to answer the following questions:

What are the criteria for evaluating appropriate marketing mixes for digital products in digital space?

For each category of digital products, which established marketing model is the most suitable?

The paper is organized as follows: first, the theoretical base underlying the study, which draws on category and marketing mix of digital products, is developed. Second, the research model and research hypotheses are then presented. Next, the research section describes how the data was collected and which criterions were adopted along with the results of the tests. This is followed by a discussion of the results. Finally, the implications of the results for research and practice are described with directions for future research.

2 Literature review and propositions

2.1 Category of digital products

Broadly speaking, digital products refer to any goods or services that can be digitized (converted into a binary format). Examples include conventional digital products like

software or music, as well as reports, magazines, or books that are now increasingly digitized and sold via the Internet (Hui and Chau, 2002). They are heterogeneous because of all the components can be reconstructed quickly and easily (Wang, 2002). The classified framework proposed by Hui and Chau (2002) which has three dimensions including trialability, granularity and downloadability (Figure 1 shown) is adopted in this study. In this framework, digital products are classified into three categories, utilities and tools, content-based digital products, and online services. The three categories of digital products illustrate much difference in trialability, granularity and downloadability (see Table 1).

Figure1 Classifying digital products. *Source*: Hui & Chau (2002)

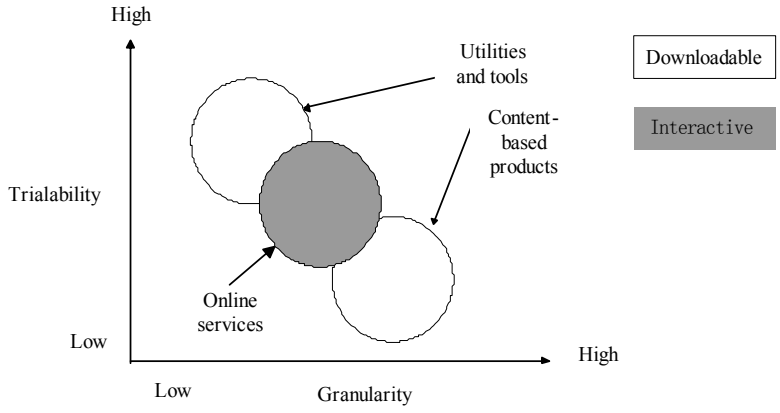

Table1 Feature comparison of different category of digital products

Category	Trialability	Delivery mode	Granularity	Sample
Content-based digital products	Low	By download	High	E-book
Utilities and tools	High	By download	Low	Anti-virus software
Online services	Medium	Interactive	Medium	Online translation

***Source*: Hui & Chau(2002)**

2.2 Marketing mixes for digital products

By nature, digital products can be transferred and delivered through the Internet (Kalyanam and Mclntyre, 2002). Digital product information, payment, transaction, and delivery can be integrated and transferred via the Internet smoothly. Conversely, transaction of physical products must be accompanied by off-line services or physical logistics (Koiso-Kanttila, 2004). Digital products have unique economic and physical features, such as huge fixed cost and negligible marginal cost (Shapiro and Varian, 1998), non-exclusiveness and non-rivalry (Zhang and Jiang, 2001), network externality (Shapiro and Varian, 2000), attrition-free (Bakos and Brynjolfsson, 2000), changeability (Wang, 2002), and easy replication. Different digital products tend to exhibit different growth rates, which are largely dependent on the underlying product characteristics and market environments (U.S. Department of Commerce, 1998). Generally, the marketing strategies for digital products are different from the physical products due to the great difference in product characteristics and market environments. For

example, digital products can be easily transacted via internet without others media. The cost of distribution and re-production is almost zero. According to the margin-cost-pricing strategy, the price of digital products should be zero. But it is impossible to producers. Thus, the margin-cost-pricing strategy is not available for digital products. Mahajan and Venkatesh argued there may exist objective conflicts in extant models (Mahajan and Venkatesh, 2000). Long-term profit maximization is appropriate for E-Business firms. However, increasing customer share and realizing profits and cash flow may be important in the short term. Therefore, the existing models may be inapplicable in E-Business situations (Mahajan and Venkatesh, 2000). Due to great differences in product's properties, transaction space and transaction process, many researchers investigate the suitability of classic marketing models in web-marketing (Mahajan and Venkatesh, 2000; Rayport and Sviokla, 1994). A typical argument is that "…marketers should focus on playing an active role in the construction of new organic paradigms for facilitating commerce in the emerging electronic society of the web, rather than infiltrating the existing primitive mechanical structures…"(Hoffman and Novak, 1997). With this in mind, many new models are proposed to replace the traditional 4P (Product, Place, Price, and Promotion) marketing mix in digital marketspace, such as 4C (Lauterborn, 1990), 4S (Constantinides, 2002), 5P (Patty, 2007), 7P (Kierzkowski et al., 1996), ICDT (Angehrn, 1997) and three "flow" models (Mahadevan, 2002). Among these models, 4C (consumer wants and needs, cost to satisfy, convenience to buy, and communication) and 4S (scope, site, synergy and system) are two of popular and influential ones.

The marketing mix probably is the most used and important criterion in modern marketing (Constantinides, 2006). The term appears to have emerged in an article by Nile Borden in "The Concept of the Marketing Mix", Journal of Advertising Research, in 1964 (Borden, 1964). The Next major event in forming the marketing mix was the work of McCarthy, who conceptualized a model of marketing which has appeared in his series of books titled "Basic marketing: A Managerial Approach" (Constantinides, 2006). The model portrays four controllable factors he designated the marketing mix: Product, Place, Price and Promotion. Applying the marketing mix model in traditional markets implies that the four P parameters of the model delimit four distinct, well-defined and independent management processes. Despite the consistent effort by many physical businesses to deal with the 4P in an integrated manner, the drafting but mainly the implementation of the P policies remains largely the task of various departments and persons within the organization. This model considers the 4P as the controllable factors likely to influence the conventional consumer's buying decisions (Constantinides, 2006).

The major weakness of the 4P in an E-Commerce environment is their focus on the product. This is not entirely surprising since the concept was developed in the days of "push" marketing, where the product was created by the company and then pushed out to consumers who had to be persuaded that they wanted and needed it. In today's more customer-oriented environment, successful marketing companies are starting to take a "pull" approach, with products being created to suit customers' expressed needs (Krueger et al., 2003). In this environment, the 4C offer an additional guide to ways of optimizing the marketing mix by Lauterborn who suggested that 4P should be replaced by 4C, including Customer needs and wants, Cost for the satisfactory, Convenience and Communication. In this model, the

vendors should sell what customers want rather than what they can manufacture; they should cut down the cost of satisfactory rather than cutting down the price; they should provide the convenience for customer's buying rather than expanding the distribution channel; they should build customer loyalty through communication rather than promotion (Lauterborn, 1990).

The 4S model is named the Web-Marketing Mix (WMM) model which identifies the online marketing critical elements and addresses the main E-Commerce strategic, operational and organizational issues in an integrated and manageable manner (Constantinides, 2002). The WMM approaches the marketing planning process in an integrated manner on different levels. On strategic level, the model identifies the main strategic issues to be addressed in order to build up a flexible, value adding and potentially successful E-Commerce organization. On operational level, the WMM proposes a method for drafting realistic and consistent Web marketing plans. On organizational level, the WMM address the issue of building up the proper organizational, human and knowledge infrastructure necessary for a smooth online operation. These issues describe the successive steps of a web commercial planning methodology and are classified in four groups. Each group is labeled by a word beginning with the letter "S" namely the Scope (strategic issues), Site (operational issues), Synergy (integration into the physical processes) and System (technical issues). The content of scope element is of primarily strategy and objectives; the content of site element is of web experience; the content of synergy element is of integration; the content of system element is of technology, technical requirements and web site administration.

Marketing mixes such as 4P, 4C and 4S are studied from different business environment and aspects. Constantinides suggested the background of 4P is industrialization, which is characterized by enterprise-centric (Constantinides, 2002). With the core of marketing changing from supplier to consumer, Lauterborn suggested that the marketing model should be emphasized from customer perspective and the 4C model is proposed which characterized by customer-centric (Lauterborn, 1990). Constantinides found website is the first phase when a traditional enterprise goes into web-business. In digital space, website is the most important interface of business. Thus, he suggested the 4S marketing model which designed for guiding website's construction. A series of study results demonstrate that there is different extent unsuitability of established marketing models applying to digital products (Hoffman and Novak, 1997; Lauterborn, 1990; Wang, 2002). In other words, none of a uniform established marketing model is appropriate for all digital products in digital space. These empirical findings justify the importance of selecting an appropriate marketing model for digital products.

According to Hui & Chau (2002), "…Depending upon the product category and the underlying product features, some E-Business strategies may be more appropriate for certain digital products than others….", there were evidences showing that there is no uniform established marketing model that is appropriate for all digital products, there may be one kind of established marketing model that is appropriate for parts of the digital products.

2.3 Propositions

The granularity is defined as a feature that captures the divisibility of digital products (Hui and Chau, 2002). The divisibility means the components of digital products can be divided into segments and reconstructed into different styles pertain to special customer's preferences. By means of the reconstructed distinctiveness, a digital product can be shaped into a series of product and each of them has some unique characteristics or functions. That is the product's differentiation ability (Wang, 2002). If the digital products have high differentiation ability, it can be shaped into more products than which one with low differentiation ability. The differentiation ability of digital products is increasing with its granularity increasing, which means the product will shape more styles in a product's series while their granularity is high. Therefore, Proposition 1 can be lead as:

Proposition 1: *The granularity of digital products has a positive relationship to its differentiation ability.*

Proposition 1 means that the differentiation ability of digital products is high while their granularity is high. Similarly, the differentiation ability is low while their granularity is low. Previous studies suggested that none of a uniform established marketing model is appropriate for all the three categories of digital products in digital space (Hoffman and Novak, 1997; Mahajan and Venkatesh, 2000; Rayport and Sviokla, 1994). This leads the following proposition which will form a foundation in this study.

Proposition 2**:** *In E-business niche, there is no uniform established marketing model existence that is entirely appropriate for all the three categories of digital products.*

3 Hypotheses

As shown in Table 1, there is a large gap in trialability between the three categories of digital products. Based on property, the utilities and tools is the best and the content-based product is the worst. With high trialability, consumers can try (experience) digital products without owning the product. There will be no payment involved. The digital products will retain its quality without any attrition after trial. Koiso-Kanttila defined digital products as experience products (Koiso-Kanttila, 2004). The customers can experience the products before making a purchase decision. At www.Rikemmett.com, for example, consumers can listen to sample music by the Canadian guitar player Rik Emmett, who sells about 50 percent of his CDs through the Internet (Holloway, 2002). Comparing with other promotional means, the consumer would prefer to experience the digital products (Tu and Lu, 2006). If the trialability is high, trial can be widely used. Otherwise, more promotional or communicational tools except trial should be applied to promotion. Thus, we suggest:

Hypothesis 1: *In marketing of digital products, the quantity of promotional or communicational tools has a negative relation to digital product's trialability.*

Hypothesis 1a: *With high trialability, the digital products need less promotional or communicational tools.*

Hypothesis 1b: *With low trialability, the digital products need more promotional or communicational tools.*

The websites is the most commonly used distributional channel for digital products. According to the ownership of a website, we may classify the distributional channel into independent websites and the 3rd party websites. For the independent websites, the manufacturers own the website and are responsible for the cost of website maintenance and construction. By using the 3rd party websites, manufacturer distributes their digital products and does not have the responsibility for constructing or maintaining the website. If a digital product vendor adopts the latter distributional mode, he can authorize their distributional operations to the 3rd party in order to decrease the distributional cost. The main difference between download and interactive is communication frequency. There is seldom communication when digital products, such as music are being downloaded. On the other hand, the communication is very frequent between the customer and vendor on condition the products with interactive delivery mode. If the products fit for interactive delivery mode, independent website is a preferable choice as it supports frequent communication between customers and vendors. However, the cost is higher than adopting 3rd party's website as distributional channel only. The differences in delivery mode may lead to differences in distributional mode. Second set of hypotheses are proposed as follows.

Hypothesis 2: *There is a correlation between the delivery mode and distributional mode in the marketing-practice of the digital products.*

Hypothesis 2a: *The 3rd party website model is suitable for downloadable delivery.*

Hypothesis 2b: *Independent website model is suitable for interactive delivery.*

As none of 4P, 4C and 4S marketing model is entirely suitable for the three categories of digital products, these three models seem to have different level of suitability when applied to each category of digital products.

Customers can get content-based digital products by downloading them via the Internet. Because of this downloadable mode, sellers can exert little control on the post-purchase usage behavior of customers and resale and redistribution of the product among customers are difficult to prevent. Vendors should fulfill customer's special preference though product differentiation and provide more convenient ways to customer's purchase. The sale may be successful on condition that customer's perceived utility of purchase is higher than their perceived utility of illegal copying from post-purchase people. The 4C model is put forward in a customer-oriented environment which emphasized eliminating the barrier of customer's purchasing. Thus, we suggest:

Hypothesis 3: *For content-based products, the suitability of 4C model is higher than 4P and 4S model's.*

Like the content-based products, tools and utilities can be downloaded via the Internet, the value of the products is completely transferred to the customers who can then examine and try out the products according to their own schedules. Parts of tools and utilities, such as anti-virus software, OS software, needs provide after sale service, including new virus definition, update package etc. Thus, the vendor of this kind of products should own the website for the convenient

providing the after sale service. As talked in criterion 1, the 4S marketing model is especially suitable to direct a website. At the same time, the new tools and utilities often pushed by vendors rather than by customer' needs because the vendor often can not achieve the customer's expectation for their technology limitation. By this means, the tools and utilities should be enterprise center perspective. According to what discussed above, we suggest:

Hypothesis 4: *For utilities and tools, the suitability of 4P and 4S models is higher than 4C model's.*

One essential feature of online services is their interactivity (Hui and Chau, 2002). Customers typically need to submit interactive requests and receive interactive responses. Such interactivity has a number of implications for online service providers. The value of the goods tends to be delivered in multiple instances. Independent website is very convenient for vendors of this kind of products because this manner possess exclusive website resource and agile response. As discussed above, the 4S model is a direction map to maintain an E-Commerce website. Therefore, we suggest:

Hypothesis 5: *For online service, the suitability of 4S model is higher than 4P and 4C model's.*

A key element of the Internet is information, which is also described as the "gasoline" in an information economy (Strauss and Frost, 1999). Selling digital products over the Internet has become a major source of revenue for many business organizations around the world. How to make it work is thus a major question for many marketing executives who are selling or planning to sell their company's digital products in the e-commerce marketplace.

4 Research methods

Philosophy of science has always considered a classificational schema to be of paramount importance. Especially in the early developmental stages of a discipline, listings and taxonomies are used as a pathway to further inquiry (Walter and Christophe, 1992). According to Philip Kotler, marketing model is a classificational schema which can be served as a taxonomic approach for the marketing tools and can be used in making marketing decisions (Kotler, 1999). In this study, 4P, 4C and 4S marketing models were adopted respectively as classificational schema to analyze marketing tools used for digital products in E-business practice.

4.1 Sample and instrument

We have collected marketing tools of digital products from three resources. Firstly, we looked towards existent literatures: there are 19 marketing tools of digital products in E-business practice to be collected. (See Appendix B) Secondly, we looked towards web marketing text books and collected 24 digital products marketing tools. (See Appendix B) Thirdly, we looked at some representative Chinese E-business enterprises (See Appendix B) and collected 2 digital product's marketing tools from their website. Table 2 illustrates this research.

Table2 Breakdown of Samples

Source	Amount of marketing tools	Percent
Literature	19	42%

Text Book	24	53%
Practice	2	5%

As mentioned in the methods section, we adopt 4P, 4C, and 4S marketing models as taxonomic approach to classify all the marketing tools of digital products. For evaluating taxonomic approaches, measure proposed by Hunt (Walter and Christophe, 1992) was adopted to provide assessments. The measure includes five items, they are:

- Does the schema adequately specify the phenomena to be classified?
- Does the schema adequately specify the properties or features on which the classification is based?
- Does the schema have categories that are mutually exclusive?
- Does the schema have categories that are collectively exhaustive?
- Is the schema useful? Does it adequately serve its intended purposes?

4.2 The evaluating criteria of suitability

In this section, we use a deductive process to build three criteria to evaluate the suitability of marketing models on different situations. All criteria are deducted from what the exclusive attributes of digital products and unique characteristics of different marketing models.

All established marketing models have certain level of and limitation on unsuitability when they are applied to digital products. Hoffman et al. suggested that it is wise to study new marketing models rather than revise the existing ones (Hoffman and Novak, 1997). The first step in proposing a new marketing mix is to review whether each category of digital products has their suitable marketing model. To fulfill this goal, some criteria should be studied for evaluating marketing models. Digital products have unique features that are different from traditional physical products. We will evaluate marketing models from three respects: distributional channel, perspective and differentiation ability. Firstly, there are two distributional channels (the 3rd party's website and the independent website), as shown in column "place" of table 3. Comparing the 4S model with the 4P and the 4C models, we notice that strategic elements are the most notable feature of the 4S model which distinguishes it from the others. It illustrates how to prepare a web marketing strategy in two situations. Firstly, talking about strategic layout, it is important to decrease the risk of web business, thus the web strategy should consistent with enterprise strategy and web business should integrate with traditional business unit. Secondly, in terms of operational layout, the 4S model provides a methodology for designing a web marketing strategy. The four "S" elements are a direction map towards constructing a website (Constantinides, 2002). Based on these, 4S model guide the enterprise to build their website and begin their web business through this website. According to Constantinides's option, the goals of 4S model are a direction map to constructing a website and begin their Internet business. Thus, 4S model is especially appropriate for web enterprise adopting independent website as their digital product's distributional channel. Criterion 1 can be lead to:

Criterion 1: *The 4S marketing model is especially suitable for an enterprise which adopts the independent website as a distributional channel.*

Secondly, the 4P marketing model and 4C marketing model greatly differs in perspective. The 4P marketing model has an enterprise center perspective and the 4C marketing model has a

customer center perspective (Constantinides, 2002). Thus, criterion 2 can be lead to:

Criterion 2: *the 4P-marketing model is especially suitable for marketing from an enterprise-centric perspective and the 4C-marketing model is especially suitable for marketing from a customer-centric perspective.*

Thirdly, the 4C and 4P models have different extent of suitability in three categories of digital products. The 4C model directs how to begin marketing from the consumer center perspective, which emphasizes the customer's demand as the foundation for successful marketing. Generally speaking, the customer's demand can be met easily when a product with high differentiation ability. Therefore, the 4C model is appropriate for digital products with high differentiation ability. At the same time, the 4P model is enterprise center perspective, which emphasizes the push process and technological feasibility of the enterprise. Under the 4P model, successful marketing is driven by the enterprise push process. When differentiation ability of digital products is low, it is hard to meet the customer's demand through product's diversity. Thus, enterprises should push product to customer using more promotional tools. That is to say the 4P model is appropriate for digital products with low differentiation ability. Thus, criterion 3 can be lead to:

Criterion 3: *the 4P model is suitable for digital products with low differentiation ability and the 4C model is suitable for digital products with high differentiation ability.*

5 Result and finding

5.1 4P classficiational schema

The 4P model delimits four distinct, well-defined and independent management processes. Despite the consistent effort by many physical businesses to deal with the 4Ps in an integrated manner, the drafting but mainly the implementation of the "P" policies remains largely the task of various departments and persons within the organization. An even more significant thought is the fact that the customer is typically experiencing the individual effects of each of the 4P in diverse situations, times and places, if a company makes extensive effort to fully integrate their marketing activities internally (Constantinides, 2002). We adopted the 4P as a classficiational schema to classify the sample (marketing tools) as a marketing tools kit of digital products, as illustrated in Table 3.

4P Classficiational Schema's Reliability and Validity

According to the criterion proposed by Hunt (Walter and Christophe, 1992) the effectiveness of this classficiational schema lies in its validity. It adequately specifies the marketing tools to be classified as well as the four well-defined management processes (product, price, place and promotion). The four well-defined management processes are mutually exclusive and all of the marketing tools have been included in the schema. Being an established marketing model, 4P is useful and can serve its intended purposes.

Table 3 4P Classficiational schema

	Content-based digital products (e-book)	Utilities and tools (anti-virus software)	Online services (online translation)

Product	Products individual (ssreader.com divide e-book into single chapter to sell) Lock in (caj browser used by China National Knowledge Infrastructure)	Quickly update version (kv3000 anti-virus software push new versions every year) Products individual (if you purchase U8 of UFIDA, you can select the modules which you need) Binding (WPS Office) Versioning (all version of WPS Office)	Lock in (QQ client) Products individual (online stock trade of West Stock)
Price	Nonlinear pricing (ssreader's reading card: ￥35/quarter, ￥100/year, ￥180/two years) Individual price (products sold in second hand market) Value shift (cfan.com provide digital copy of magazine freely, which promote the sale of paper magazine) Two-part price (sleeping rent of telephone and payment every time)	Group price (user of kv3000 net version should pay ￥10/month) Name your price (priceline.com.tw) Two-part price (after purchase U8 of UFIDA, you should pay for using every year) Value shift (newhua.com is free, revenue come from advertisement because of huge visiting stream)	Individual price (online lesson service of new oriental in second hand market) Two-part price (there are initial ISP service payment then pay for using every year)
Place	3rd party's website (dangdang.com)	Independent website (jiangmin.com) 3rd party's website (newhua.com)	Independent website (russky.com)
Promotion	Recommendation (the suggestion provided by ssreader.com that readers who bought this book also bought other titles) Personalization (When Mary returns to the dangdang.com, it responds "Hello Mary") Comparison shopping (pconline.com.cn) Customization (Yahoo China) User comment list (ssreader.com) Individual recommendation ("we knew you buy some EB books last time, there are some related books for you") Rules-based system ("the exercises book is a good complement to this book") Ordering tools (shopping basket) Advertisement is involved in product (books of ssreader.com) Requirement register (ssreader.com) Digital watermark (photosl.net)	Rules-based system (before downloading update package, Pls. select version) Ordering tools (shopping basket) Advertisement is involved in product (Flashget software) Trial (WPS Office provide limited trial) Authorization limitation (KV3000 net version can check virus, but can not update) FAQs (jiangmin.com)	Affiliates (russky.com) FAQs (russky.com) Instant Message (QQ) BBS (bbs.russky.com)

5.2 4C Classficiational Schema

With market competition turning from product-oriented into customer-oriented, a number of drawbacks of the 4P model can be observed. Under this condition, the 4C marketing model was proposed by Lauterborn in which he suggests the marketing strategies concerning product, price, place and promotion should be replaced by consumer wants and needs, cost to satisfy, convenience to buy and communication in E-environment (Lauterborn, 1990). This model surveys a marketing problem from the consumer perspective (Constantinides, 2002). The content of this model includes four points. Firstly, what the customer wants should be sold rather than what you can manufacture. Secondly, enterprise should take all efforts to decrease the cost of fulfilling the customer's demand. Thirdly, enterprise should make all efforts to purchasing as convenient as possible. Finally, communication with the customer is more important than

promotion. Table 4 illustrates the analysis based on the 4C classficiational schema of three categories of digital products.

Table 4 4C Classficiational schema

	Content-based digital products (e-book)	Utilities and tools (anti-virus)	Online services (online translation)
Consumer wants and needs	Products individual (the ssreader divided e-book into single chapter to sell) Binding (e-book bind browser) E-coupons (sozhao.com/tools/yhq/dangdang.asp) User comment list (ssreader.com) Requirement register (ssreader.com) Classified advertisement (8848.com)	Quickly update version (kv3000 anti-virus software push new versions every year) Products individual (if you purchase U8 of UFIDA, you can select the modules you need) Binding (WPS Office) Versioning (all version of WPS Office) Advertisement of different category (newhua.com)	Products individual (online stock trade of West Stock) Version (online translation of netat.net.cn can restrict different subject) Classified advertisement (multi-language translation of netat.net.cn)
Cost of satisfy	Nonlinear pricing (ssreader's reading card: ￥35/quarter, ￥100/year, ￥180/2 years) Individual price (products sold in second hand market) Two-part price (sleeping rent of telephone and payment every time) Value shift (cfan.com provide digital copy of magazine freely, which promote the sale of paper magazine)	Group price(user of kv3000 net version/￥10/month) Name you price (priceline.com.tw) Two-part price (after purchase U8 of UFIDA, you should pay for using every year) Value shift (newhua.com is free, revenue come from advertisement because of huge visiting stream)	Individual price (lesson online service of new oriental in second hand market) Two-part price (there are initial ISP service payment then pay for using every year)
Convenience to buy	3rd party's website (dangdang.com) Ordering tools (shopping basket) Security policy (see the privacy and security notice on ssreader.com) Comparison shopping (pconline.com.cn) Virtual reality (e360.cn)	Independent website (jiangmin.com) Ordering tools (shopping basket) Security policy (see the privacy and security notice on jiangmin.com) Trial (WPS Office provide limited trial)	Independent website (russky.com) Security policy (see the privacy and security notice on russky.com)
Communication	Recommendation (the suggestion provided by ssreader.com that readers who bought this book also bought other titles) Personalization (When Mary returns to the dangdang.com, it responds "Hello Mary") Customization (Yahoo China) Individual recommendation ("we know you buy some EB books last time, there are some related books for you") Rules-based system ("the exercises book is a good complement to this book") Trial (first 17 pages is free in ssreader.com) Online auction (ebay.com.cn) FAQs (ssreader.com) Digital community (Sun digital community)	Rules-based system (before downloading update package, please select version) Advertisement is involved in product (Flashget software) Trial (WPS Office provide limited trial) Authorization limitation (KV net version can check virus, but can not update) FAQs (jiangmin.com) Auction (ebay.com.cn)	Affiliates (russky.com) FAQs (russky.com) Instant message (QQ) BBS (bbs.russky.com) Digital community (Sun digital community)

4C Classficiational Schema's Reliability and Validity

As an established marketing model, 4C is reliable. According to the criterion proposed by Hunt (Walter and Christophe, 1992), this classficiational schema is valid. It adequately specifies the marketing tools to be classified and adequately specify the four well-defined management processes (consumer wants and needs, cost to satisfy, convenience to buy and communication) as classification properties. The four well-defined management processes are mutually exclusive and all of collected marketing tools have been specified into the schema. Being an established marketing model, 4C is useful and can serve its intended purposes.

5.3 4S Classficiational Schema

The 4S classficiational schema (web-marketing model) was proposed by Constantinides (2002). In 4S classficiational schema, the scope element is of primarily strategic character and outlines the decisions to be made in four areas: (a) the strategic and operational objectives of the online venture; (b) the market definition including measuring the market potential and the identification/classification of the potential competitors, visitors and customers of the site; (c) the degree of readiness of the organization for E-business; (d) the strategic role of E-business for the organization. The website is therefore the functional platform of communication, interaction and transaction with the web customer. The prime mission of the website is to attract traffic, establish contact with the online target markets and brand the online organization. The synergy factor embraces a wide range of issues divided into three categories: the front office, the back office and the third parties. The front office refers to conventional corporate communication and distribution strategies; the back office synergy includes three issues: (a) the integration of E-business physical support into existing organizational processes; (b) the legacy integration; (c) integration of the online operation into the company's value system. The success in virtual marketplace often requires co-operation with Internet partners outside the organization and its value system. Finally, the system factor identifies the technological issues as well as the site servicing issues to be addressed by the E-business management. Table 5 illustrates the analysis based on the 4S classficiational schema.

4S Classficiational Schema's Reliability and Validity

Based on the Constantinides's research and evaluating with the Hunt's criterions, the 4S classficiational schema is reliable and valid.

Table5 4S Classficiational schema

	Content-based digital products (e-book)	Utilities and tools (anti-virus)	Online services (online translation)
Scope (strategy and objective)	Market segmentation (demographic variables, geographic variables, psychographic variables and behavioral variables) Potential customers (profiles, motivation, behavior and needs) Internal analysis (internal resources, value process and sustaining web technology)	Same as left	Same as left

	Strategic role of the web activities (information platform, educational, promotional and transactional)		
Website (online experience)	Link exchange (Coolgo e-book; ssreader) Advertisements Factors of website (domain, content, design, layout, atmosphere etc)	Speed optimization of website Factors of website (domain, content, design, layout, atmosphere etc)	Speed optimization of website Factors of website (domain, content, design, layout, atmosphere etc)
Synergy (integration)	3rd party's website (dangdang.com) The back office (physical book store)	Independent website (jiangmin.com) The front office (updating product installed in client)	Independent website (russky.net/trans/) Third parties (outsourcing of logistic)
System (technology requirement)	Technology requirement of website (stabilization, security, software, hardware, protocol, system service etc) Preliminary payment system (ssreader)	Technology requirement of website (stabilization, security, software, hardware, protocol, system service etc) Instant payment system (kv3000) Post-payment system (￥10/month of net version)	Technology requirement of website (stabilization, security, software, hardware, protocol, system service etc) Instant payment system (payment can be finished by SMS and network in website (russky.net/trans/))

6 Discussions

6.1 Hypotheses 1 and Hypotheses 2

From Table 3 and Table 4, we see the same findings that content-based digital products with low trialability have more promotional or communicational tools than other two kind of digital products. As the promotion column of Table 3 and communication column of Table 4 illustrating, there are 11 promotion tools and 9 communication tools of content-based digital products. At the same column of table 3 and 4 illustrating, the utilities and tools have 6 promotion tools and 6 communication tools which are less than the content-based digital product's. At the same time, we find from the promotion column of Table 3 and communication column of Table 4 that the online services have 4 promotion tools and 5 communication tools which are less than content-based digital product's too. This finding means hypotheses 1b is supported. In contrast, the utilities and tools and online services whose trialability is higher than content-based digital products have less promotional or communicational tools than content-based digital products. This means Hypotheses 1a is supported. That is to say there is notable negative relation between the amount of promotional or communicational tools and digital product's tralability. Thus, Hypotheses 1 is supported. A probable explanation is that digital products is a kind of experience products which are durable and have a depreciation rate that is nearly zero. Therefore, sampling is widely practiced in the digital products such as software and on-line music industries. Software vendors often release either limited-feature software as a free trial version or a full version for a limited-time free trial. An example is the demo version of Endnotes, which offers a free trial for a limited period (Tu and Lu, 2006). Trial does not simply raise public awareness and improve perceptions of a product. The direct experience it brings reduces new product uncertainty and the uncertainty risk of purchase (Conrad, 1976; Heiman et al., 2001;

McGuinness et al., 1995). Sometimes, trial is a more effective marketing technique than advertising. According to McGuinness, Philip, and Mathew, trial has a greater effect on sales than television or newspaper advertising (McGuinness et al., 1992). Wright and Lynch demonstrate that direct product experience has an advantage over newspaper advertising (Wright and Lynch, 1995) and McGuinness, Brennan, and Philip show that the combined use of product sampling and coupons promotes a product trial more effectively (McGuinness et al., 1995). Thus, the best promotional tool for digital products is trial. If some digital products with low trialability, such as content-based products, promotion should be achieved through more promotional or communicational tools except for trial. For digital products with high or medium trialability, such as utilities and tools or online services, trial is priority of other promotional or communicational tools.

From Table 3, we find the 3rd party's websites are often adopted as a distributional channel of content-based digital product's vendor. Independent website is often adopted as a distributional channel for online service suppliers, which means Hypotheses 2a and Hypotheses 2b are supported. The difference is caused by their different delivery modes illustrated in Table 1. The value of content-based product can transfer by download mode. Suppliers can distribute the products through the 3rd party's website. Using this mode, the supplier's distributional cost is lower than opting for the independent website because the 3rd party shares the cost of the website. If the delivery mode is interactive, such as online service, the manufacturer needs to communicate with the customer frequently. Under this condition, adopting the 3rd party' web store as a distributional channel is not a feasible way because it is hard to ensure efficiency of communication. Independent website is only a feasible way. By this way, frequent and vast communications can be supported for exclusive site and bandwidth, and then manufacturer can adjust the contents of website momentarily and freely. The utilities and tools are special. Their delivery mode is downloading, mentioned in Table 1. Thus, the 3rd party's website is a feasible distributional channel, such as www.nuwhua.com website, which supported Hypotheses 2a too. However, with frequent updates (e.g., update package of the anti-virus software) of utilities and tools, manufacturer often constructed website by itself, such as jiangmin.com website. Providing after sale services is the main purpose of these websites. That is to say some utilities and tools have parts attributes of online service and it should adopt independent website as distributional channel. Which distributional channel is appropriate for utilities and tools lie on whether or not providing after sale services. Thus, Hypotheses 2a and 2b are supported too.

6.2 Hypotheses 3, 4, 5

The website is the most common distributional channel for digital products. E-business enterprises who adopt an independent website as a distributional channel, must consider how to construct a website and how many marketing tools can be used for building a website. Thus, the 4S model is appropriate for the digital products which should adopt an independent website as a distributional channel, as mentioned in criterion 1. As Table 3 and Table 4 illustrated, online service and utilities and tools often adopt independent website as a distributional channel. Thus, the 4S model is appropriate for utilities and tools and online service, illustrated in Table 6.

Table 6 suitable digital products of three category marketing models

Marketing model	Appropriate for (digital products)
4S	Online service, utilities and tools
4C	Content-based products
4P	Utilities and tools

Content-based products have the highest granularity in three categories of digital products, mentioned in Table 1. According to the proportion 1, they have the highest differentiation ability in three categories of digital products. As we had talked in criterion 3, the 4C model is appropriate for products with high differentiation ability, thus the 4C model is more appropriate for the content-based products, illustrated in Table 6.

Because new utilities and tools were often driven by manufacturer that accompanying their technology progress and push process. Enterprise-centric perspective and manufacturer push process are typical features for this category digital product. According to criterion 2, the 4P model is appropriate for utilities and tools well, illustrated in Table 6. From Table 6, we find the 4P, 4C and 4S marketing models have different suitability on three kinds of digital products, including the 4S model fitting for online services and utilities and tools, the 4P model fitting for content-based products and the 4C model fitting for utilities and tools. If we shifting the perspective from which digital products fits for each kind of marketing models into which marketing model fits for each kind of digital products, we should reorganized the Table 6 according to the three kinds of digital products. That is to say, we interchange the two columns of Table 6 and classify the marketing models according to the three digital products, including content-based products, tools and utilities and online services, which shaped the Table 7. The row 1 of Table 7 shows that the 4C model is the most suitable marketing model for content-based products, which supported hypotheses 3. The row 2 of Table 7 shows that 4P and 4S models are the most suitable marketing models for utilities and tools, which supported hypotheses 4. At the same time, the row 3 of Table 7 shows that 4S model is the most suitable marketing model for online services, which supported hypotheses 5.

Table7 suitable marketing model for three category digital products

digital products	Appropriate for (marketing models)
Content-based products	4C
Utilities and tools	4P, 4S
Online service	4S

From what the discussions above, hypotheses 1 to hypotheses 5 are supported, which means the two questions, including what are the criteria for evaluating appropriate marketing mixes for digital products and which established marketing model is the most suitable for each kinds of digital products, that we talk about in section one have been answered.

7 Conclusion and implication

This study explores an untapped research problem, the suitability of established marketing models to digital products in digital marketspace. The established marketing models such as 4P, 4C and 4S are widely used for conventional physical products and they are very successful in marketing practice. Nevertheless, the unique features of transaction process, transaction space and product attributes make digital products different from marketing from conventional

physical products. Based on the difference between digital products and physical products in transaction, we proposed three criteria to evaluating the suitability of established marketing model for digital products.

The contribution of study is three fold. Firstly, for digital products, the amount of marketing tools has negative correlation with its trialability. That is to say, the high (low) trialability a digital products is; the less (more) promotional or communicational tools it needs. Secondly, there is matching correlation between two delivery modes and two distributional modes while marketing of three categories of digital products. With download (interactive) delivery mode of digital products, the 3rd party's website (independent website) is a feasible distributional mode. Thirdly, for each category of digital products, there are one or two established marketing models fit for, as Table 7 shown.

7.1 Managerial implication

Nevertheless, the findings of this study may have some practice implications. Firstly, the study brought encouraging news for managers who engage in digital products marketing. With unique features, transaction space and transaction mode, digital products marketing cannot be treated as physical products. Some new marketing tools, which are appropriate for these unique features should be developed. Second, all the E-enterprises mentioned in the sample come from China. Thus, the findings may provide a systematical reference manual when Chinese E-enterprises or some enterprises want to enter Chinese selecting a marketing taxonomy schema.

7.2 Future research

This study is a static type and it examines the suitable marketing mix of different digital products in digital markespace. Additional studies can look at the phenomenon over an extended marketspace of digital products and aim to propose a fit-to-all marketing mix for digital products.

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Appendix A: Network Address of Cases

Chao-Xin Digital Library: www.ssreader.com

Chao-Xin Digital Library, which constructed by Chao-Xin information technology Ltd, is the biggest digital library of China. There are millions of digital books, including literature, history, law, military, economy, science, medicine, engineering, architecture, traffic, computer and environment, in it. Readers can download books from website and then reading with the special reading software (SSReader).

China National Knowledge Infrastructure: www.xa.cnki.net

World Bank proposed the concept of National Knowledge Infrastructure (NKI) in 1998. CNKI digital library is NKI of China, which constructed by Tsinghua university and Tsinghua tongfang hi-tech enterprise.

West Securities Co. Ltd: www.westsecu.com

West Securities Co. Ltd is constructed in 2001 and authorized by China Securities Regulatory Commission (CSRC) to deal with securities trading and other correlative service.

UFIDA Software Co. Ltd: www.ufsoft.com.cn

UFIDA Software Co. Ltd is one of the leading providers of management software solutions and service in Asia. Established in 1988, UFIDA has been recognized as an outstanding software company in the marketplace due to its quality of products, professional service and a vast customer base of 400,000 in China and other regions in Asia.

WPS Online: www.wps.com.cn

WPS is office applications software (same as Microsoft office software) of Kingsoft Co.Ltd, which is a leading online game and application software developer and distributor in China.

Computer Fans: www.cfan.com.cn

Computer Fans, which is the biggest circulation of computer magazine in China, is constructed and authorized by Chinese Academy of Sciencer (CAS). It was created in 1993 and sells millions of paper copies each month now.

New Oriental Online School: www.neworiental.org

After a decade's effort, new oriental school have become the most prestigious education and training bases in the fields of training for domestic and overseas examinations, primary school English, secondary school English and so on. The new oriental school was created with a clear firm objective to provide students marketable skills and enhance their employment opportunities. Featuring a combination of college education and vocational education, it has thousands of trainees at present.

HiChina Web Solutions (Beijing) Limited: www.net.cn

Founded in 1996 and invested by American based IDG Venture Capital and Newbridge Capital, HiChina is the flagship in the Chinese Internet service industry. HiChina engages itself in the development of E-infrastructure with advanced technologies in high performance virtual servers and E-business platforms to help corporate clients set up their own websites with minimal investment, demonstrating in a new style of E-marketing and E-business.

Yahoo China: cn.yahoo.com

Yahoo! China, a division of Alibaba.com, is a leading Internet search brand serving China's consumers and businesses. Yahoo! China's search properties combine globally- and locally-developed search technologies to provide the world's most relevant Chinese-language search results. Yahoo! China plays a valuable role in powering E-business in China and is a leading advertising platform for China's small - and medium-sized businesses.

Flashget: www.amazesoft.com

Falshget is software, which can help download files from Internet. Flashget is specifically designed to address two of the biggest problems when downloading files: Speed and management of downloaded files. Flashget can automatically split files into sections or splits, and download each split simultaneously. The powerful and easy-to-use management features in Flashget help you take control of your download easily.

Long-An Interactive Virtual Reality: www.e360.cn

According customer's demand, using multimedia and others interactive technology, the virtual reality are created on the Internet niche.

Sun Digital Community: www.sunabc.com

It is an Internet community, at which Chinese is main language of communication.

Coolgo E-Book Net: www.coolgo.net

A website offer free digital books (Chinese) to reader.

Name Your Price: www.priceline.com.tw

Priceline has pioneered a unique type of E-business known as a "demand collection system". This system enables consumers to use the Internet to save money on world-class airline tickets and hotel rooms while enabling sellers to generate incremental revenue. Using a simple and compelling consumer proposition — Name Your Own Price — it collect consumer demand in the form of individual customer offers, guaranteed by a credit card, for a particular product or service. This website is operated by Hutchison-Priceline (Travel) Ltd, an independent company formed with investments from Hutchison Whampoa Ltd, a Hong Kong-based multinational conglomerate with operations in 36 countries, and priceline.com Inc., based in the U.S. Launched in April 1998, priceline.com is consistently rated the best travel-deal provider on the Internet.

Jiangmin Anti-Virus: www.jiangmin.com

The full name of Jiangmin Anti-Virus is Beijing Jiangmin New Science & Technology Company Ltd, which dedicates itself to researching, developing and selling computer software & hardware. The Anti-Virus software (KV series) is a main product of it.

Rising Anti-Virus: www.rising.com.cn

Rising Tech. is a leader in antivirus and content security software and services in China. It provides a broad range of content and network security software and appliance solutions to individuals, enterprises and service providers. The company is a leading provider of client, gateway and server security solutions for virus protection, firewall and intrusion detection technologies and security services to enterprises and service providers around China.

Ocean Translation Centre: www.ocntrans.com

Beijing Ocean Times Translation Service was founded in 1996 which offering Chinese translations from or into more than 50 languages.

New Hua Software: www.newhua.com

New Hua Software is a website, which provide software download in China freely.

Mutil-Language Translation: www.russky.com

This website offers multi-language translations including Chinese into English, Chinese into Russian, and so on.

Pacific Online: www.pconline.com.cn

A portal website provides IT product's price and market information of China.

Work Shop: bbs.russky.com

An example is BBS community of russky.com website.

Tencent: www.qq.com

Founded in Shenzhen in November of 1998, Tencent is recognized as the operator of the leading Internet community in China. Tencent's instant message service platform, "QQ," was formally launched in Feb 1999. After years of strong business growth, on July 16, 2004, Tencent Holdings Limited (SEHK 700) went public on the main board of Hong Kong Stock Exchange.

Sheng-Zhen Photography: www.adsphoto.com.cn

This website offers original photography and video.

DangDang Book Store: www.dangdang.com

DangDang Book Store is the biggest Chinese web bookstore. About 300,000 Chinese books or music & movies offer to global Chinese reader.

8848: www.8848.com

8848.com Inc has two operations. One is offer E-store planning for medium-size enterprises that is a platform of medium-size enterprises to develop E-business. The other is shopping searching engine.

Jin-Qiao Translation: www.netat.net

This website provide professional and punctual translation service for clients, depending on advanced computer-aided intelligent translation system and professional translation team. Their services cover many languages in the world including English, Japanese, Korean, French, German, Russian, Portuguese, Italian, Spanish, and so on. In long-term operation, they have received unanimous favorable comments from all circles of society and established long-term cooperation with many governmental institutions and famous enterprises.

eBay and Yiqu: www.ebay.com.cn

Yiqu is a partner of eBay in China.

Appendix B: Definition of Term

	Description	Example	Source
Product Individual	Different customers are provided with different products	In MusicMaker.com, customer can choose the favorite songs and make it into a CD.	(Shapiro and Varian, 2000):P29
Lock in	The switch cost is very high when change a system into another	Sony digital camera use memory stick as storage only	(Shapiro and Varian, 2000):P92
Update version quickly	Update version quickly for retaining competition advantage	New version Windows products are put forward quickly	(Shapiro and Varian, 2000):P255
Binding	Wrap several products into a package and sell on one price	Office products	(Shapiro and Varian, 2000):P65
Individual pricing （first-degree discrimination）	Different price for each individual based on their willingness to pay	Airline company sells air-ticket.	(Shapiro and Varian, 2000):P36
Version （second-degree discrimination）	This pricing scheme based on customers' voluntary choices	There are three versions, including home, professional and server, of windows	(Shapiro and Varian, 2000):P36
Group price （third-degree discrimination）	Different price for each group based on group identification	Student version of Mathematica software	(Shapiro and Varian, 2000):P36
Digital watermark	Compelling customer to get authority from website	Photo in photosl.net	(Shapiro and Varian, 2000):P79
Value shift	Product is free, profit come from additional function and service	Reader of PDF document is free, but creator of PDF document is not free	(Shapiro and Varian, 2000):P223
Nonlinear pricing （discount according quantity）	The price decrease with order-quantity increasing	First is entire-price, second is half-price	(Rafi et al., 2004):P250
Market	Customer are grouped		(Rafi et al.,

segmentation	according their similarity		2004):P34
Target market	Choosing target market in market segmentation		(Rafi et al., 2004):P34
Two-part pricing	Price is composed by two parts, including fixed fee and variable fee	Sleeping rent of telephone and payment every time	(Rafi et al., 2004):P252
Individual	Customizing for single customer through interaction	Visiting Amazon.com, site show "Hello！Mary"	(Rafi, 2004):P583
Customizing	Modification of what is presented based on preferences set by user	My Yahoo!	(Rafi et al., 2004):P156
Classified advertisement	Person checking classified advertisement often have active demand	Second-hand market of xaonline.com	(Rafi et al., 2004):P289
Digital community	Virtual community on web which is a platform of communication	Sun digital community	(Rafi et al., 2004):P320
Position	Something influence latent intent of customer		(Rafi et al., 2004):P74
Recommendation	Offering suggestion to customer's buying	Top 10 of Amazon	(Kalyanam and Mclntyre, 2002):P489
Name you price	A buying approach in which buyers, who are willing to flexible, indicate the price they are willing to pay for a product or service and are matched to seller who can meet the price	Name you price system of priceline.com	(Kalyanam and Mclntyre, 2002):P489
User's comment list	Comment of products and services provided by users	User's comment of dangdang.com	(Kalyanam and Mclntyre, 2002):P489
Individual recommendation	Recommending products according previous behavior of customer	"We know you buy E-business book last time, there are several similar books for you"	(Kalyanam and Mclntyre, 2002):P489
Rule-based system	Adjusting what is presented based on rules set by expert	"the white liner shirt is a good complement to these green pants"	(Kalyanam and Mclntyre, 2002):P489
Ordering tools	Tools that are convenience to purchase	Shopping basket	(Kalyanam and Mclntyre, 2002):P489
FAQs	A listing of frequently being asked questions	FAQs on E-marketer.cn	(Kalyanam and Mclntyre, 2002):P489
Membership	Some website oblige guest register as a member for accessing	You should register as a member before accessing chinaren.com website	(Kalyanam and Mclntyre, 2002):P489
Instant message	Tools for transfer instant message	QQ, msn messenger	(Kalyanam and Mclntyre, 2002):P489

E-coupons	Coupons offered by website and customer can download and print	Coupons of KFC offering on kfc.com.cn website	(Kalyanam and Mclntyre, 2002):P489
Wish list	A list of products or services that an individual is interested in	See the wish list section on the Amazon.com	(Kalyanam and Mclntyre, 2002):P489
Auction online	Auction in online niche	www.ebay.com	(Kalyanam and Mclntyre, 2002):P489
Link exchange	Different website share customer of their own	If you have registered on hotmail, you also can visit msn.com with same user name and password	(Kalyanam and Mclntyre, 2002):P489
Security policy	Website offer some measures to protect customer's information	See the privacy and security notice at amozon.com	(Kalyanam and Mclntyre, 2002):P489
Synergy of the front office	User should download special client for access website	Special browser software of ssreader.com	(Constantinides, 2002):P72
Synergy of the back office	Making existing organizational infrastructure available to the online operations	tjbb.com is co-operate with TianJin books store	(Constantinides, 2002):P72
Synergy of the third parties	Co-operation with Internet partners outside the organization	dangdang.com outsourcing their logistics business to the third parts	(Constantinides, 2002):P73
Trial	Something can experience without payment	You can use Office 50 times before purchase	(Constantinides, 2002):P75
Authorization limitation	User are compelled to obtain authorization from website	If you want additional service of McAffee, you should pay for authority	(Constantinides, 2002):P76
Virtual reality	Simulation aftereffect of using products	Garden.com	(Feng, 2004):P41
BBS	Platform of communication	bbs.xjtu.edu.cn	(Feng, 2004):P269
Advertisement is involved in product	Advertisement is involved in product	There are items in KV series anti-virus software link to jingmin.com	(Feng, 2004):P41
Comparison shopping （search engine of shopping）	A website offer different prices of the same product sold in different store	BizRate.com 8848.com	(Feng, 2004):P291
3rd party's website	Business platform provided by others (middleman)	eBay.com	(Feng, 2004):P64
Independent website	Website constructed by manufactory	www.jiangmin.com	(Feng, 2004):P65
Preliminary payment	Deposit before using	www.ssreader.com	
Instant payment system	Buying and payment occur in the same time	In russky.net/trans, you can pay by mobile phone or network	