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A RESEARCH ON THE WEB2.0 VALUE CO-CREATION BUSINESS MODEL

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ABSTRACT

In recent years, with the fast development of Internet communication technologies, a large numbers of Web 2.0 companies increasingly appear including Facebook, MySpace, Youtube. Unlike Web 1.0, Web 2.0 is driven by using the Web as a platform and facilitates user participation, interactive knowledge sharing, and collaboration for value creation on World Wide Web. Meanwhile, Web 2.0 companies encourage participants to contribute content, tools, and software applications collaboratively. Therefore, how Web 2.0 companies leverage different participants including content developer, users, customers, service provider to co-create value on the platform become critical. The aim of this study is to understand the critical factors for managing successful and sustainable value co-creation business models of Web 2.0 websites. To go a step further, we hope to understand the following research questions: (1) What kind of value created by Web2.0 websites? (2) What are the important factors to attract users to participate in the value co-creation business model? (3) How to gain profits through the value co-creation business model?

This study conducts deep analyses of the existing literature and typical web 2.0 cases including Cyworld, Facebook and Salesforce.com. The results of this research propose four critical factors for managing successful and sustainable value co-creation business models of Web 2.0 websites: (1) Establishing a running smooth platform; (2) Setting up continuous participation rules; (3) Designing a mechanism to continuous creating and accumulating users' needs; (4) Devising a fair and inspiring mechanism of value exchange among participants. We follow up describe details of the four critical success factors. This study provides an important basis

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for understanding the critical factors for managing successful and sustainable value co-creation business models of Web 2.0 websites. The results hope to provide insights for web 2.0 platform managers and future researches related to web 2.0 platform and value co-creation issues.

Keyword: Business model, value co-creation, value net, value exchange

INTRODUCTION

Technological advances transformed the Internet into our daily life. The Internet is currently gone through a new stage of growth, with a set of new features and capabilities becoming available to companies. These new ways can be collectively referred to as ‘‘Web 2.0.’’ Web 2.0 is web applications that facilitate participatory information sharing, interoperability, user-centered design, and collaboration on the World Wide Web (Wikipedia, 2011). It includes social networking sites, blogs, wikis, video sharing sites, hosted services, web applications, and so on. Many web 2.0 companies, such as Facebook, MySpace, Youtube, sense the opportunities and are engaged in this competition. In the meantime, Web 2.0 companies encourage participants to contribute content, tools, and software applications collaboratively. Therefore, how Web 2.0 companies leverage different participants including content developer, users, customers, service provider to co-create value on the platform become critical. The object of this study is to understand the critical factors for managing successful and sustainable value co-creation business models of Web 2.0 websites. To go a step further, we hope to understand the following research questions: (1) What kind of value created by Web2.0 websites?

(2) What are the important factors to attract users to participate in the value co-creation business model?

(3) How to gain profits through the value co-creation business model?

LITERATURE REVIEW

WEB 2.0

Web 2.0 is the transformation from Web 1.0 internet-enabled delivered content to participation-based internet communities (Adebanjo and Michaelides, 2010). Web2.0 is a platform that continually updated new user content, where information is delivered through searching and collating data from many sources delivering rich user content to facilitate an ‘‘architecture of participation’’(O’Reilly, 2005). Moreover, Web2.0 is a set of economic, social, and technology trends that collectively form the foundation for the next generation of the Internet. It is

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more mature, distinctive medium characterized by user participation, openness, and network effects (Musser and O'Reilly, 2006). O'Reilly (2005) generated the differences between web 1.0 and web 2.0 (Table 1).

Table 1 Differences between web 1.0 and web 2.0

Function	**Web 1.0**	**Web 2.0**
Online linking	Static	Dynamic
Focus of use is on:	Companies	Communities
Networking architecture	Client-server	Peer-to-peer
used for sharing files such as video, music and text files	file is saved on one server machine	files are distributed across many PCs
Coding	html	xml
Webaddresses	Home pages	Blogs
Content aggregation	Portals	RSS
Getting updated information	Stickiness	Syndication
Searching	Directories-taxonomy	Tags-folksonomy
Data	Owning	Sharing
Content	Through publishing CMS	Through participating Wikis

Key collaboration technologies of web 2.0 include Wikis, RSS, blogging, podcasting, peer-to peer and desktop search (Gartner, 2005). Web 2.0 firms take advantage of a lot of the techniques: (1) search, (2) link, (3) authoring, (4) tag, (5) extension, and (6) signal (McAfee, 2006). Web 2.0 has many characteristics such as dynamic content, rich user experience, user participation, metadata, web standards, and scalability (Best 2006). Moreover, Greenmeier and Gaudin (2007) consider openness, freedom, and collective intelligence are essential attributes of Web 2.0. Later, Wirtz et al., (2010) consider four characteristics of web 2.0 including social networking, interaction orientation, personalization/customization and user-added value.

Business Model

A business model is a methodology and a set of assumptions that explains how a business creates and earns profit in a competitive environment (Lumpkin and Dess, 2004). Business models are stories that explain how enterprises work and are the managerial equal of the scientific method, you start with a hypothesis, which you then test in action and revise when necessary (Magretta, 2002).Moreover, a business model represents the design of transaction

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content, structure, and governance so as to create value through the exploitation of business opportunities (Amit and Zott, 2001). The functions of a business model includes articulate the value proposition; identify a market segment and specify the revenue generation mechanism(s); define the structure of the value chain within the company and determine the complementary assets needed; estimate the cost structure and profit potential of producing the offering; describe the position of the comapny within the value network; formulate the competitive strategy (Chesbrough and Rosenbloom, 2002). Afterwards, a business model is a conceptual tool that includes a set of elements and their relationships and allows indicating a firm's logic of earning money. It is a description of the value a firm offers to one or several segments of customers and the architecture of the company and its network of partners for creating, marketing and delivering this value and relationship capital, in order to generate profitable and sustainable revenue (Osterwalder, 2004).

Table 2 Four Pillars and Nine Building Blocks of a Business Model

Pillar	**Building Block**	**Description**
Product	Value Proposition	A Value Proposition is an overall view of a company's bundle of products and services that are of the value to the customer.
Customer Interface	Target Customer	The Target Customer is a segment of customers a company wants to offer value to.
	Distribution Channel	A Distritution Channel is a means of getting in touch with the customer.
	Relationship	The Relationship describes the kind of link a company establishes between itself and the customer.
Infrastructure Management	Value Configuration	The Value Configuration describes the arrangement of activities and resources that are necessary to create value for the customer.
	Capability	A Capability is the ability to execute a repeatable pattern of actions that is necessary in order to create value for the customer.
	Partnership	A Partnership is a voluntarily initiated cooperative agreement between two of more companies in order to create value for the customer.
Financial Aspects	Cost Structure	The Cost Structure is the representation in money of all the means employed in the business model.
	Revenue Model	The Revenue Model describes the way a company makes money through a variety of revenue flows.

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Value Network and Value Exchange

Stabell and Fjeldstad(1998) consider three distinct value configurations including value chain, value shop and value network. A value net is a dynamic network of customer/supplier partnerships and information flows. It is activated by real customer needs and is able to respond rapidly and reliably to customer preferences. A value net creates value for all of its participants including company, suppliers, and customers because of these participants operating within a collaborative, digitally linked network (Bovet and Martha, 2000). Brandenburger and Nalebuff (1996) propose value net is a schematic map designed to demonstrate all the players in the game and the interdependencies among them. Interactions happen along two dimensions. Along the vertical dimension are the firm's customers and suppliers. Along the horizontal dimension are the players with whom the firm interacts but does not transact. They are its substitutors and complementors (Figure 1). A player is a complementor if customers value your product more when they have the other player's product than when they have your product alone. Furthermore, a player is a competitor if customers value your product less when they have the other player's product than when they have your product alone.

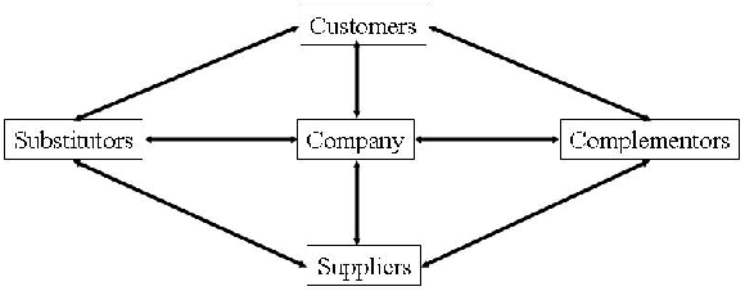

Figure 1 The Value Net

Source: Brandenburger and Nalebuff (1996)

A value network generates economic value through complex dynamic exchanges between one or more companies, its customers, suppliers, strategic partners, and the community (Allee, 2000). Table three summarized three ways of value exchange in a value network including (1) goods, services and revenue; (2) knowledge; (3) intangible benefits (Allee, 2000).

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Table 3 Three Ways of Value Exchange

Value Exchange	Description
Goods, services and revenue	Exchanges for services or goods, including all transaction involving contracts and invoices, return receipt of orders, requests for proposals, confirmation, or payment.
Knowledge	Exchanges of strategic information, planning knowledge, process knowledge, technical know-how, collaborative design, policy development.
Intangible benefits	Exchanges of value and benefits that go beyond the actual service and that are not accounted for in traditional financial measures, such as a sense of community, customer loyalty, image enhancement or co-branding opportunities.

Value Co-Production

In industrial value creation, customers were considered as destroying the value which producers had created for them (Ramire, 1999). An alternative view of value creation, value co-production, is customers creating value, they do not destroy it. Value is not simply 'added,' but is mutually 'created', 'reconciled', 'combined' or 're-created' among actors with different values (Ramire, 1999). Morever, Normann and Ramirez (1989) consider five elements for a new generation offering:

1. physically tangible goods
2. human services carried out by and shared among, at least, supplier and customer persons
3. risk-sharing and risk-taking formulae among interacting parties
4. access to, or usufruct of, systems and infrastructure
5. information, manifested orally, tacitly-often based on previous experience, or in written or numeric or other symbol systems.

To sum up, Ramire (1999) proposes the main differences between Industrial View and Co-productive View (Table 4).

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Table 4 Two Views of Value Production

Industrial View	**Co-productive View**
Value creation is sequential, unidirectionally transitive, best described in 'value chains	Value creation is synchronic, interactive, best described in 'value constellations
All managed values can be measured in monetary terms	Some managed values cannot be measured or monetized
Value is added	Values are co-invented, combined and reconciled
Value a function of utility and rarity	Exchange the source of utility and rarity
Values are 'objective' (exchange) and 'subjective' (utility)	Values are 'contingent' and 'actual' (established interactively)
Customers destroy value	Customers (co-)create values
Value 'realized' at transaction only for supplier (event)	Value is co-produced with customer, over time-for both co-producers(relationship)
Three-sector models pertinent	Three-sector models no longer pertinent
Services a 'separate' activity	Services a framework for all activities considered as co-produced
Consumption not a factor of production	Consumers managed as factors of production (assets)
Economic actors analyzed holding one primary role at a time	Economic actors analyzed as holding several different roles simultaneously
Firm and activity are units of analysis	Interactions(offerings) are units of analysis

RESEARCH METHODOLOGY

To understand the critical factors for managing successful and sustainable value co-creation business models of Web 2.0 websites, we chose a multiple case study approach. The case study approach is appropriate for providing insights and answers to "how" and "why" questions (Yin, 1994). This study conducts deep analyses of the existing literature and typical web 2.0 cases including Cyworld, Facebook and Salesforce.com. The reasons to choose Cyworld, Facebook and Salesforce.com as the representative Web 2.0 companies

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are: (1) they encourage knowledge sharing, users' interaction and open platform; (2) they all make profits from web 2.0 websites.

This study refers to Osterwalder's research and uses five elements including customers, products, partnership network, revenue model, business strategies to analyze the business model of Cyworld, Facebook and Salesforce.com. Furthermore, this study uses Allee's three ways of value exchange to draw the value net of three cases.

Table 5 Three Ways of Value Exchange

Code	Value Exchange	Description
V(P)	Goods and services	Exchanges for services or goods.
V($)	Revenue	Exchanges for financial capital.
V(K)	Knowledge	Exchanges of strategic information, planning knowledge, process knowledge, technical know-how, collaborative design, policy development.
V(i)	Information	Exchanges of information including market, product, customers' information.
V(V)	Intangible benefits	Exchanges of value and benefits that go beyond the actual service and that are not accounted for in traditional financial measures, such as a sense of community, customer loyalty, image enhancement or co-branding opportunities.

Case Analysis and Result

Cyworld

Cyworld is a South Korean social network service operated by SK Telecom. In 2005, around twenty five percent South Korean use Cyworld. In 2006, 19 million Korean use Cyworld and 80% income was generated from the sale of virtual goods..Cyworld also run overseas market including China, German, Japan, United States, and Vietnam[1]. Figure 2 shows the value and

Value Exchange of Cyworld

[1] Telecoms Korea， http://www.telecomskorea.com/business-8268.html; Cyworld website

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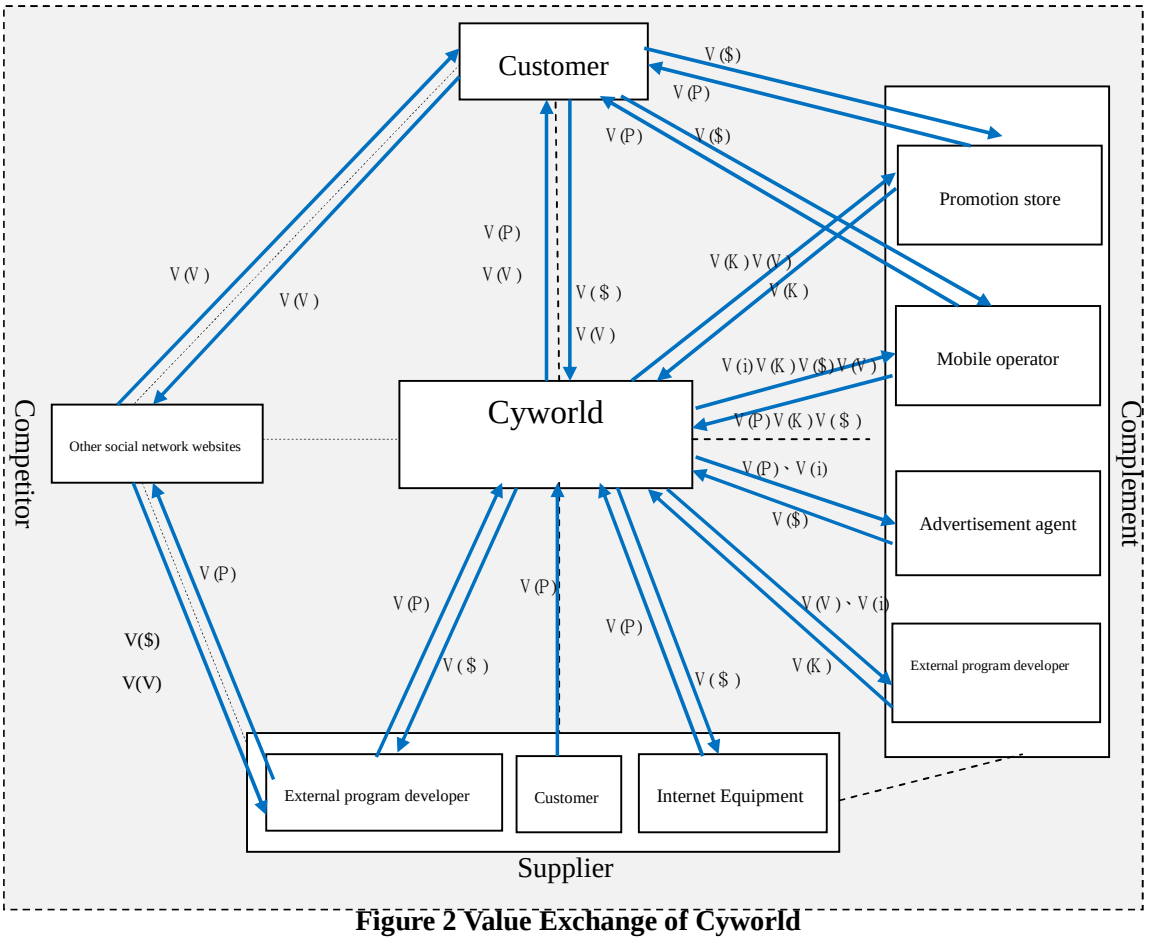

Figure 2 Value Exchange of Cyworld

Facebook

Facebook is a social networking service and website launched in 2004, and 600 million active users in 2011. Users can create a personal profile, add other users as friends, and exchange messages, automatic notifications when they update their profile[2]. Figure 3 shows the value and Value Exchange of Facebook.

[2] Glenn Chapman (AFP)，Facebook membership hits 500 million mark，July 21, 2010，http://www.google.com/hostednews/afp/article/ALeqM5hX4tdF-h7Ci3SM1ymWyU0gyYsKrQ

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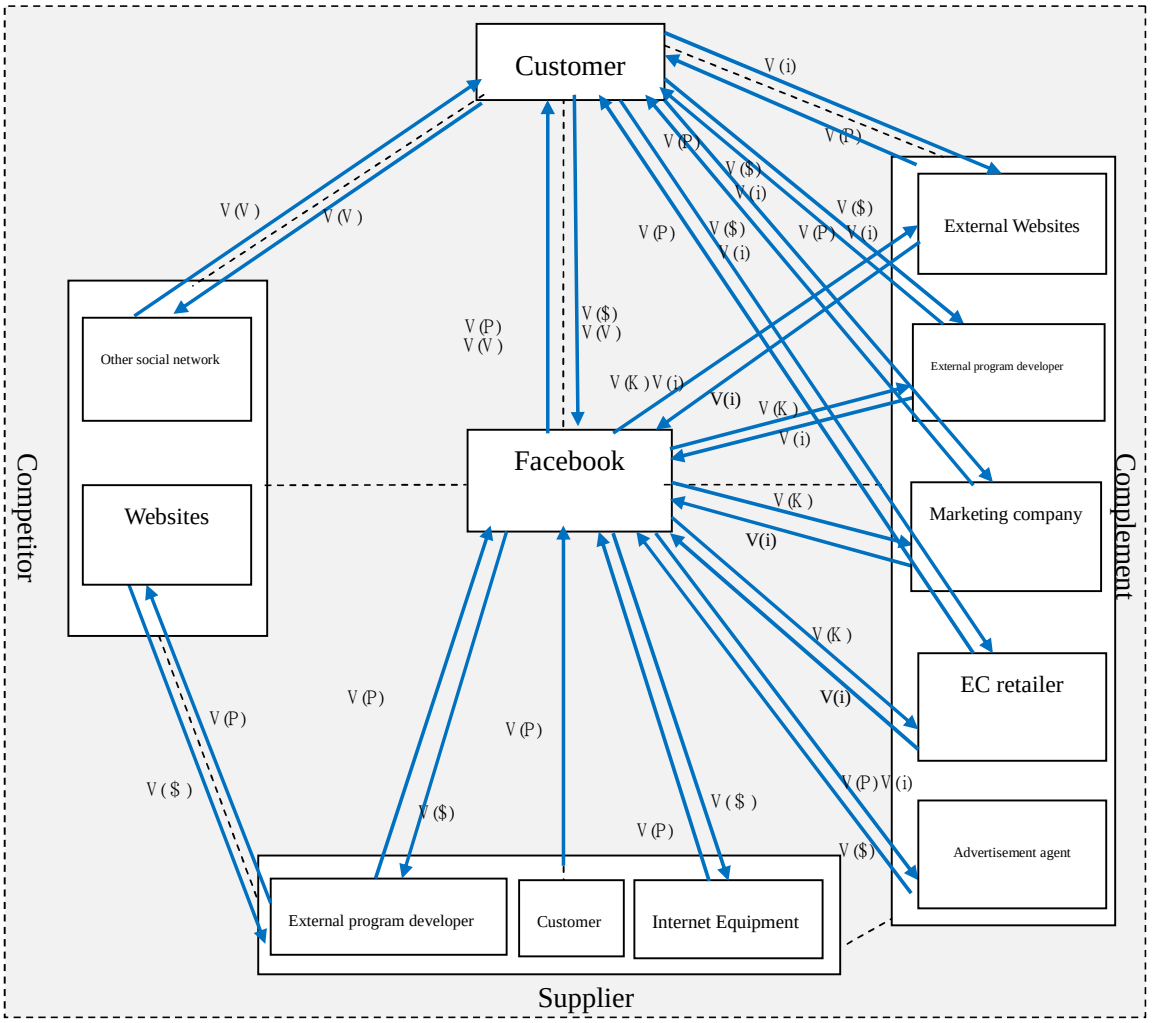

Figure 3 Value Exchange of Facebook

Salesforce.com

Salesforce.com was cloud computing company founded by former Oracle executive in 1999. Its services translated into 16 different languages and currently have 82,400 customers and over 2,100,000 subscribers[3]. Figure 4 shows the value and Value Exchange of Salesforce.com.

[3] http://www.salesforce.com/tw/company

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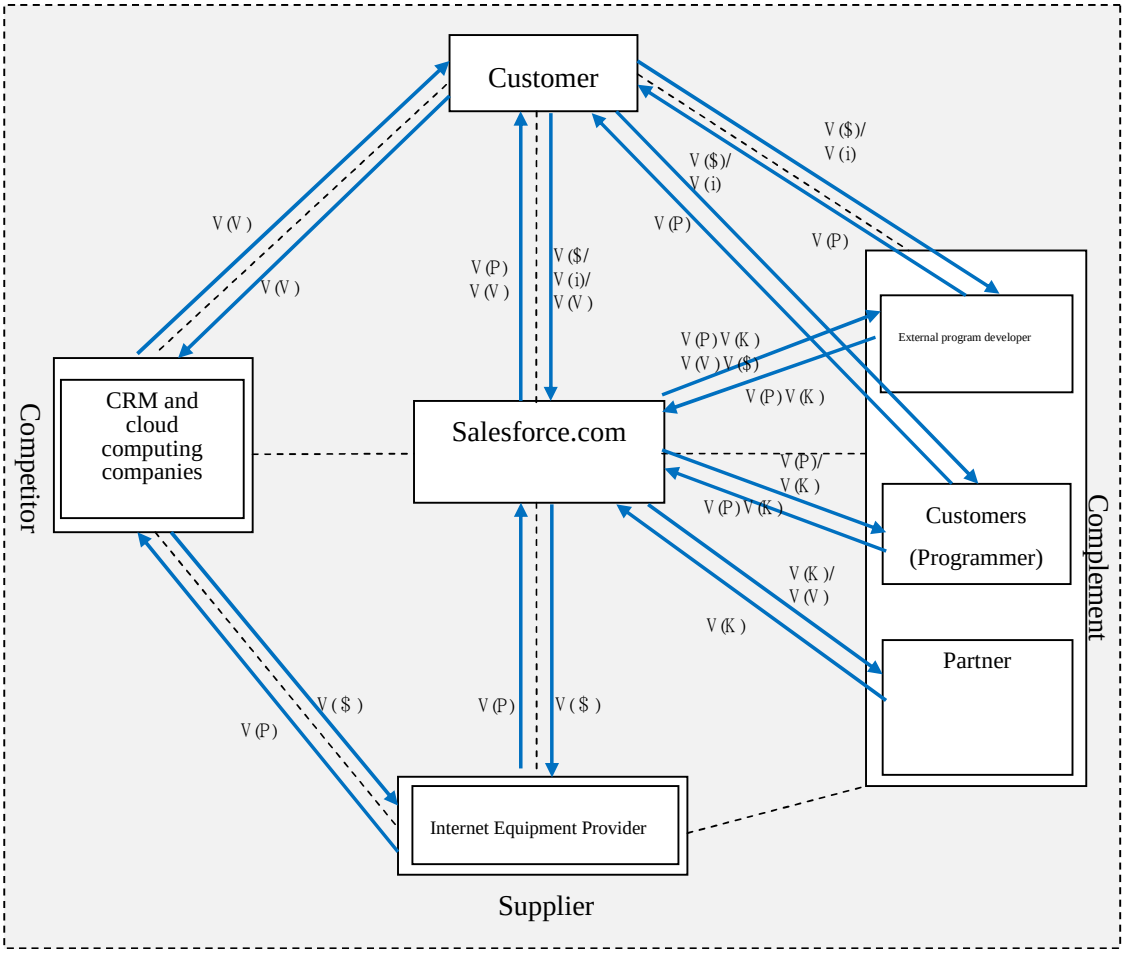

Figure 4 Value Exchange of Salesforce.com

CONCLUSION

The results of this research propose four critical factors for managing successful and sustainable value co-creation business models of Web 2.0 websites: (1) Establishing a running smooth platform; (2) Setting up continuous participation rules; (3) Designing a mechanism to continuous creating and accumulating users' needs; (4) Devising a fair and inspiring mechanism of value exchange among participants. Theoretical validation and

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empirical testing are necessary.