

Business Virtualization Influences Marketing Innovation: A Theoretical Perspective

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ABSTRACT

The rise of Internet brings business to another competitive realm, or operation in conventional, physical marketplace heading for modern, virtual marketspace. Business managers often speculate on the business needs innovative form of operation under intensive change of environment. The alignment and transformation of the organizational structure should be actively reflected while a business has been confronting competition for survival. The life cycle of a business verifies the theory of evolution Darwinism. The system and rule of the market sometimes change least but sometimes most. The competitive analysis of value chain and system that the business usually employs is examined continuously in the new era. Based on the literature review, this research took network organization, virtual product and service, objective integration, resource deployment and Information Technology as the dimensions to direct the business virtualization. The virtual business operates their virtual value chain by means of gathering, organizing, selecting, synthesizing and distributing of information. The discussion of this research is that the different dimension and mix of business virtualization will influence that of the patterns of marketing innovation, such as product, notion, service, pricing, distribution channel and advertising. This research would build the business model that a business can operate appropriately in the marketplace and the marketspace after business virtualization. In conclusion, business virtualization is the focus of the strategic choice when an organization faces environmental changes and challenges, and marketing innovation presents the ability to catch the market opportunity and share and strengthen the position established.

Keywords: Business Virtualization, Virtual Value Chain, Marketspace, Marketing Innovation

INTRODUCTION

On January 19, 2005, CNN published a list of the most "25 non-medically related technological innovations" over the past quarter century according to a panel of technology leaders assembled by the Lemelson-MIT Program, which promotes inventiveness in teens (CNN, 2005). On a list of the top 25 innovations of the past 25 years represent "that have become widely used since 1980, are readily recognizable by most Americans, have had a direct and perceptible impact on our everyday lives, and/or could dramatically affect our lives in the future". Those 25 innovations are 1. Internet, 2. Cell phone, 3. Personal, computers, 4. Fiber optics, 5. E-mail, 6. Commercialized GPS, 7. Portable computers, 8. Memory storage discs, 9. Consumer level digital camera, 10. Radio frequency ID tags, and the rest omitted refer to CNN 2005TECH website. From supply-side based that those 25 technological innovations has changed the resources delivers of business in reality and the same way by demand-side based the business also apply frequently the innovations to practical operation. They employ profit-orientation organized, partly or comprehensively as substantive instrumental consideration with process reengineering and transformation of business for big gainer.

This research will reflect what type of new business is in 21st century relying on the opinion of innovative generated from the interactive relationship of human, business organization and society. Whereby the business shall communicate with themselves and consumer? What "epoch value" will generate for the society of global village?

In the recent thirty years, many scholars divide the Five-Force analysis of "Competitive Strategy" (Porter, 1980) and Value-Chain analysis of "Competitive Advantage" (Porter, 1985) into watershed to observe the businesses. They face intensive competition and environmental challenge day by day. If businesses want to operate forever, they should pursue innovation and transformation. The key elements of business operator has to do is inspecting overall traditional base of creating value and re-evaluating the physical value chain for broadening the scope of business operation. An

important pattern is the e-commerce involving in Internet that is the businesses carry out deconstructing the traditional value chain as transformation of operation with virtual value chain for creating higher value-added (Rayport and Sviokla, 1995). Evans & Wurster (1999) propose a second generation of electronic commerce is emerging, one that will be shaped more by strategy than by experimentation. The battle for competitive advantage will be waged along three dimensions: reach, affiliation and richness. This research has a dig of this opinion which employs the innovative skill of information technology for influencing business transformation and exploring the possibility of marketing innovation for “Reach”, “Affiliation” and “Richness” of consumer. Therefore, the objectives of this research include 1. Studied the background and characteristics of business virtualization; 2. Studied the intrinsic characteristics of marketing innovation; 3. Explore the influence of business virtualization on marketing innovation.

LITERATURE REVIEW

Business Change

It has seemed social revolutions happening like a raging fire in the world since Internet open to public access in 1994. Those situation are alike the invention of lamp, telephone and car one more century earlier, civil aviation open up before half century and computer launched out ahead quarter century. Those significant inventions affect human live and industry deeply and far. Internet with IT application is universal and breakthrough to change with each passing day that strike against the business organization to rethink the positioning of selfhood and customer.

Grove (1999) acutely pointed out all businesses are Internet company or eBusiness or eCommerce, that is to say some company will not be exist if they are not eB or eC. Although the argument is not absolutely, the e-transformation step of global and multinational business are never sluggish. Most of the enterprises are online in 2005 (Lu, 2005), the observation of Grove becomes truth. Davidow & Malone (1992) bring up the concept of “Virtual Corporation” which presents the top objective of future business is providing the virtual product and service and thoroughly remold oneself as virtual business. Only the formation of virtual business can manage intense competitive environment and quickly response (QR)/ efficient consumer response (ECR) for customer and supplier. Kalakota & Robinson (1998) propose the formation of e-Business and believe transformation of organization can contend the challenge of the new Internet era. Umar & Missier (1999) are among those who note transformation of formation that e-Business evolves into virtual business based on the Information technology. The transformation of business virtualization can quickly reach the extended enterprise; strengthen the provision of personalized customer service and effective cooperation with suppliers, customers and business partners in the planning, implementation and measurement operations.

Business Virtualization

The related topics of business virtualization include: Network Organizations, Internet Business Models, E-Business and Virtual Enterprise. Because most companies still retain the existing entity or that bricks-and-mortar and clicks-and-mortar business model, that is entity implicit in the characteristics of enterprise virtualization companies still accounted for the majority, only a handful of pure Internet companies (pure play) of pure virtual enterprise are exist in the marketplace (Davidow & Malone, 1992; Monge & DeSanctis, 1999; Afuah & Tucci 2003). In order to reflect the facts and the status quo, as long as it is the above-mentioned organizations, or one of the Internet business model, e-business and virtual enterprise are this type of research called "Business Virtualization" .

The rise of Internet in mid-1990s brings business to another competitive realm, or operation in conventional, physical marketplace heading for modern, virtual marketplace. Business managers often speculate on the business needs innovative form of operation under intensive change of environment. In the past, the pattern of industry operation consisted of vertical integration and specialization. Based on the Porter's (1980) theory of value chain, vertical integration is the single owner has the most value system or complete value activity. The resources exchange within business of vertical integration adopts system selection for reduction of cost in resources acquirement, enhancing market competitive and decreasing uncertainty for reducing exchange cost (Davies & Eliance, 1996). However, the system selection may lead to loss of bureaucracy (Boddy, et al., 1998) and induce agency cost of internal linkage through class coordination.

The value creation and allocation of business transform greatly due to paradigm shift of IT (Bakos, et al., 1991 ;

Benjamin & Wigand, 1995) that will directly impact on each organization of different industry and basic activity of value chain and have a value chain innovation, nurture the space of value, relationship logistics management and speed up the concept of supply chain links. This is a virtual world made of Internet for analysis of value chain and integration of virtual world. Rayport & Sviokla (1995) argued that only making integration of physical and virtual value chain well the businesses can build and maintain the competitive advantage, thereby proposed a virtual value chain model for fitness to master both value chain and measure the competitive advantage of business.

Creating value in any stage of a virtual chain involves a sequence of five activities: gathering, organizing, selecting, synthesizing, and distributing information (Rayport & Sviokla, 1995). These virtual value creation activities are not however of the same nature as the physical value activities identified by Porter (Weiber and Kollmann, 1998). Rayport & Sviokla (1995) noted if managers want to pursue any of these opportunities, they need to put into place processes to gather the information, organize it for the customer, select what's valuable, package (or synthesize) it, and distribute it – the five value-adding steps unique to the information world. In effect, these value-adding steps, in connection with the virtual value chain, make up a value matrix (see in Figure 1) that allow companies to identify customer's desire more effectively and fulfill them more efficiently. The value matrix guide managers as they consider how to establish the processes necessary to exploit new opportunities (market) (Rayport & Sviokla, 1995).

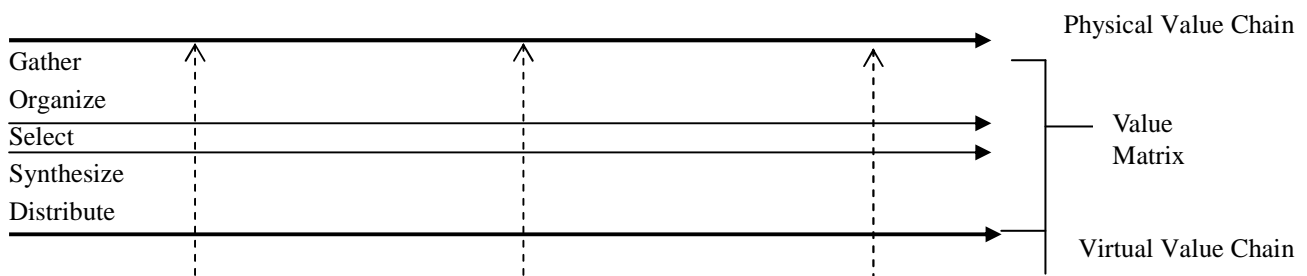


Figure 1. Value Matrix

(Source: Rayport and Sviokla, 1995, Exploiting the virtual market value chain)

There is presently no apparent common view on the definition of business virtualization in academy. We could explain by different point of view. This research induces five directions as following: 1. Organization of Internet structure; 2. Virtual product and service provision; 3. Objective integration; 4. Resource deployment; 5. Information Technology (see table 1).

Table 1. Scope of Business Virtualization

Direction	Content	Example	Researcher
Internet Structure	Business Virtualization (BV) is temporal business network organization which is constituted of diverse location company. Each member brings core competitive ability respectively and does not have solid organization for response the rapidly changeable environment.	Amazon Yahoo! e-Bay	Byrne(1993) Durutta (1994) Holland and Lockett(1998) Bultje, René, Wijk and Jacoliene (1998) Umar and Missier (1999) Schonsleben (2000)
Virtual product and service	Virtual product is an application of product and service for anywhere, anytime and different kind of classification. Specifically, ideal virtual product and service should be instantaneously and customized.	CNN Breaking News and sport live program MP3, Web TV Follow Me (Traffic) TV Nissan 「ToBe」 Cyberbank	Davidow and Malone (1992) McDonald (1995) Camarinha-Matos and Afsarmanesh (1997)

Objective integration	Business Virtualization is sort of objective activity-orientation management. The key point of management is satisfied with demand of customer. VB appeal to intellect workers for producing innovative and break up the organization after reaching objectives. The essence of VB is subsistence.	IBM shopping Rakuten Ichiba (online shopping business) e-Bay Internet housing agency Gamania.com	Goldman, McDonald ; Vickery (1995) Martin, David, Tom, Morris, Su. and Poulin (1996) Bertok, Mantyla, McGovern and
Resource deployment	BV only preserves the core capability, communication and coordination and controlled-activity and outsourcing for non-professional product and service. VB form an alliance of product development for mutual resource deployment which can catch market opportunity quickly and diminish the capital investment and risk.	Nike Dell TrendMicro SYNNEX	Goldman et al. (1995) Applegate et al., Savage (1996) Camarinha-Matos, Afsarmanesh (1997)
Information Technology	BV apply electronic element in place of physical part and the main body is electronic connection and communication. BV will carry out complete process operation by extensive application of integrated computerized and communication technology. IT can link separate member unity	7-11 and Retail Support International Wal-Mart FedExp easyJet	Davidow & Malone (1992) Bleecker; Lucas & Barioudi (1994) Whitehairm and Campbell (1995) Monge and DeSanctis (1999)

The way to business virtualization will emerge while there is one or more combination of five directions by literature study. Business virtualization is the necessary direction for possession of competitive. The research attempts to identify business virtualization as a network organization of temporal business with computerized and communication technology, particular core competence among members. The business virtualization appeal to intellect workers, carry out high interaction of information process and develop innovations actively for response the rapidly changeable environment and reach the most important goal of meet customers needs in the shortest possible time.

This research treated further and clarify the characteristics of business virtualization in literature as following (Davidow and Malone,1992 ; Goldman et al., 1995 and Tuma, 1998):

- Quickly response the treat of competitors and various preference and demand of customers: the businesses endeavor to cut down cost while shorten the schedule of R&D for competitive challenge and demand of consumers.
- No immovable organization: the member of head-downstream suppliers, distributors and customers are affiliated with different way of cooperation. They have equal status for acquiring assorted resources which accelerate value-chain activity of product and service or obtain low-price work force from human market, therefore, there are not immovable organization in the existence. In some period, the employees of affiliated firms are more than the host business.
- Close cooperation of head-downstream members: link head-downstream multi-suppliers, distributors to operate equally and simultaneously in division of labor for processing different projects. The operation is associated to shorten product development to market-launched for beneficial result of concurrent engineering.
- Catch target market for solution of customer: to hold market pioneer in rapid changing environment so that customer utilize the product and service completely and help problem-solving of customer and value creation.
- Reduction of cost and risk by coordination of market force: the first strategic consideration of building virtual business is risk-sharing, infrastructure, R&D, the cost of workforce and technology and the resources individual business cannot afford. The memberships are complementary with deficient in competence for the most exploitation and output of resources.

- Emphasis of trust and self-control: the internet memberships in virtual organization may not face-to-face for decision and operation based on IT involved in transmission and inter-medium. The staffs of businesses in the inter-relationship should be as general partners, whether managers or co-workers should not be antagonistic and maintain trust and cooperation for reaching win-win goal. Everyone should have self-control; otherwise it is difficult to promote the objectives of businesses
- Decentralized decision-making: the members of virtual business may be scattered in various localities, meanwhile they have to do the most rapid response of decision-making for rapidly changing market, and therefore, members of organizations must have of the decision-making autonomy and full authorization.

The Strategic thought of Innovation

To explore marketing innovation, this research is thinking about the core idea of innovation and attempting to couple with it. Drucker (1986) argued the term of innovation should be economic or social terms, rather than in terms of science and technology. He advocated and defined the innovation from supply-demand side. The innovation is changes in the output of manufacturers' resources from supply side and changes in resources providing the value and satisfaction of consumers from demand side. Tsai (2001) noted the core idea of marketing is exchange and objective of value exchange is not only physical products but opinion, currency and finances and service. Anyone company is may be carrying out innovations in those areas for increasing the value-added exchange. The mention above has expressed top marketing performance, which is creation of customer value is not only coming from product innovation, but extending and developing others. In particular, the businesses are working on professional division of function-orienting when product life cycle (PLC) is increasingly shorter and homogeneous product more and more. If the professional company of marketing does not have the capability to design product, they could depend on product packing and other marketing mix for creating excess surplus.

The upper half of literature review is business virtualization presenting a kind of organization innovation associated with concentration of core competence and transformation of the organizational structure for developing business model of innovation and competitive advantage. The discussion of this section related to marketing innovation will show business explore more flexible and possible market opportunity, this is enterprise can occupy first-mover/preemptive advantage. The preemptive advantage includes advantage of market resource and operation resource (Lu, 2005). Those advantages will catch the recognition and habit of customer and their externalities

The Associated Research of Marketing Innovation

There has been rare in literature of marketing referred to "marketing innovation" in recent thirty years, and only a handful of home and abroad scholars use "it" as a part of theme. The studies of marketing innovation are following:

- Damanpour (1991) divided innovation into product and process innovation. There is quite reference value from point of view of marketing. Procedure innovation match to manufacturing process innovation or the latter is comparison with progressing innovation of marketing planning. The theory of marketing emphasizes the business should provide the value the customer need. The value is not confined product or service and might be in the process of value delivery. For example, the business provides more convenient way of merchandise-acquiring in channel and effect creation of recreation in advertising or promotion activities. Those are part of value-providing.
- Webster (1992) pointed out the formation of marketing organization concentrated efficiency, vertical integration and large institute in the pass. The organizations gradually evolve cooperation-oriented strategic alliance, joint-venture or network formation for changeable, competitive market environment. Particular company is responsible for the work of its core activities. From this point of view, not each company of marketing is capable of new product development or technology. Those businesses can demonstrate the innovation activities to various aspects, for example, many home agency of famous abroad brand do not have the initiative and ability to develop new product, and however they have basic capacity of marketing as well, strategy of innovation, positioning and marketing activities are necessary in order to maintain their competitiveness.
- Lin (1993) proposed four innovation strategies for categorizing new product strategy of innovation. There are integration innovation, technology innovation, marketing innovation and cost innovation. The marketing innovation

presents the change of product form for co-ordination with trend of fashion to fulfill specific psychological demand of consumer. In addition, Lin address the pattern of consumer goods is closely linked to pattern of innovation. Low-rational/high-emotional products are difficult to differentiate the difference of branding by function; thereby marketing-orientation is good for innovation strategy.

- Slater & Narver (1995) indicated innovation comes from the gap between product of company and market demand and company can lead the resources to satisfaction of demand.
- Atuahene-Gima (1996) proposed two constructs of innovation; the first is collocation of innovation with marketing, presenting whether the current new product can utility existing marketing capacity and resources of company. For example, sales team, place, market research and customer service work together for coordination. The second is collocation of innovation with technology, presenting the manufacture of new product in application and collocation of existing level of technology. Both with the more degree of collocation, the more new product launch successfully in market.
- Andrews & Smith (1996) assumed marketing innovation is meaningful process or finished goods of differentiation that the organization would like to reach.
- Kim & Mauborgne (1997) conceived of product innovation, in addition to this, collocation of service and delivery innovation which making value curve of company is different from competitors for increasing profit and growth rate of company. That is to say the source of success of high growth company laid in adaption of strategic logic: value innovation. The key strategy of company is not to defeat their competitors but make them become irrelevant. The study concludes that the new company of value creation replicated is often able to make full use of three platforms: product, service and delivery. The product platform is physical product; service stand for help of firm providing; delivery represent logistics, place of commerce depending on particular industry.
- Horng (1999) pointed out the scope of marketing innovation consist of many dimensions, however, these concrete marketing activities of business, innovation of idea, finance and goods, service, pricing, promotion and distribution as essential domain for encouraging businesses and customers have trade practices. Innovation of idea, finance and goods and service are as a broad product innovation among these dimensions.
- Tsai (2001) noted marketing innovation as: organizations create innovative products or marketing process, which has market novelty and the value of meeting potential demand of customers. This definition of the marketing innovation is a concrete, explicit act of organization creation. The acts include many dimensions of business marketing activities such as new products launch, advertising presentation, promotion activity, pricing strategy and new type of channel or multi-combination mechanism of innovative marketing. This objective of actions is to satisfy potential unmet needs of customers.
- Rober & Racine (2001) offer twelve fundamental abilities of Internet in his book, “e-strategy, Pure & Simple” , includes: 1. influx 2. Build to order 3.customer Self-service 4.direct sales of producer 5.channel integration 6.joint business 7.sales knowledge 8.recombination of product 9.marketplace 10.dynamic pricing 11.entrance (portal sites) 12.one-to-one marketing. To think the point of view of marketing above, we will find the mix and dimension of innovation.

This research concludes six dimensions of marketing innovation based on above arguments and opinions of innovation from other scholars. The related contents and definitions as followings (Table 2):

Table 2. Six Dimensions of Marketing Innovation

dimension	Content	Researcher
Product	Novelty: consumers are willing to change the habit to get with new product. The products of firm supply are differentiation and uniqueness in the market.	Aguahene-Gima, Andrew and Smith (1996) Afuah, Chandy and Tellis (1998)
Idea	high-emotional, psychological level advocated for spiritual salve, satisfaction and consumer recognition(make the differentiation with physical product and operating service)	Lin (1993) Horng (1999) Rober & Racine (2001)
Service	Provide above the expected demands of consumers recognition, actively develop the potential demands of consumers, meet the product knowledge and solutions; meet the feeling of	Horng (1999) Atuahene-Gima (1996) Kim & Mauborgne (1997)

	participant with Self-service to alleviate the uncertainty.	Rober & Racine (2001)
Pricing	Competitive price: influx numbers of buyers and sellers and Quantity price system for acquiring best buy or cost; dynamic pricing: the dynamic supply-demand of e-marketplace will determine the market price on Internet.	Horng (1999) Tsai (2001) Rober & Racine (2001)
Place	Multi-option: direct sales of producers, cyber market, the model of physical-virtual integration (online order with home delivery or pick in neighbor store) and innovative, convenient portal sites.	Damanpour (1991) Atuahene-Gima (1996) Kim & Mauborgne (1997) Tsai (2001) Rober & Racine (2001)
Advertising	New types of media advertising apply IT to create flash pictures and special effects with physical and virtual characters for initiating breaking and flesh subjects.	Damanpour (1991) Tsai (2001)

The common focus of research related marketing innovation is market-orientation, focusing on consumer demand. The innovative action of businesses are not only innovation before competitors drive, but also developing innovative products, service and further marketing activities before consumers understand their potential needs.

CONCEPTUAL FRAMEWORK AND DISCUSSION

This research brings five dimensions into business virtualization. The business virtualization will operate virtual value chain activities through information gathering, organizing, selecting, synthesizing, and distributing. The planned marketing strategies when implemented whether delivering the type of performance involving marketing innovation after business virtualization. That is different orientation of business virtualization would lead to various type of marketing innovation.

This framework based on above literature review and logic as follows (Figure 2):

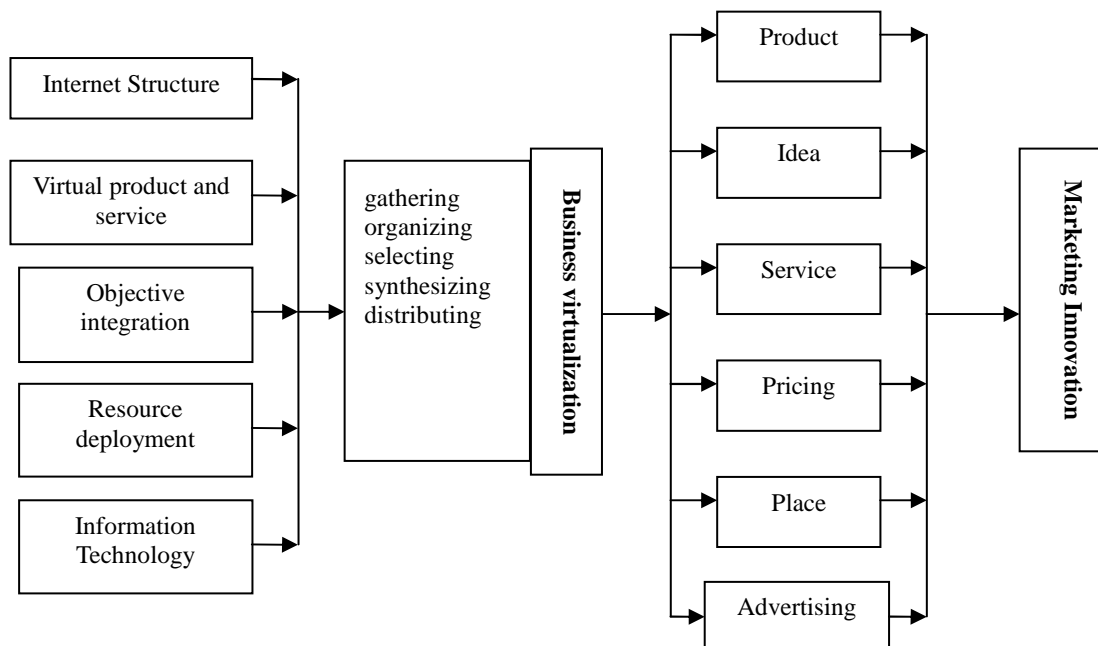


Figure 2. Conceptual Frameworks

Discussion 1: business virtualization involving Internet or IT orientation would be able to develop the types of product, service, pricing, place or advertising associated with marketing innovation.

The types of business virtualization apply integrative computer and communication technology broadly to operate complete business process. The members of network organizations with core competence individual self scattered in different areas using electronic nodes and communication to collocate and perform the excellent service channel. For examples, 7-11 and Retail Support International, Wal-Mart and his several important suppliers such as P&G, Wrangler International, all apply quick and progressive information flow for presenting power of logistics. Consequently, there is no limitation between product and delivery of advertising. Furthermore, some famous portal sites of trade like as Amazon, e-bay and Yahoo, which influx numbers of global buyers and sellers who are buffs roaming on marketpace because of bright and cool advertising and convenient portal entrance.

Discussion 2: business virtualization involving the orientation of virtual product and service provision or objective integration would be able to develop the types of product, service or advertising associated with marketing innovation.

The types of business virtualization always provide various product or service to meet customer needs and preference at anytime and anywhere, that is to say instantaneously and customized. The product of information-based service, such as CNN Breaking News, live sport report, MP3, Web TV and Movie download, appealing Gama.com, Follow Me (Traffic) TV, flyvision, Nissan 「ToBe」, cyberbank are no time difference. All case above mode of transmission explores much transmission performance opportunities of advertising through new type of media. These businesses provide major virtual product and service, as a matter of fact executing management activities of objective integration orientation, for example, the famous website, Rakuten Ichiba, for store opening and Internet housing agency.

Discussion 3: business virtualization involving the orientation of resource deployment would be able to develop the types of product, service or advertising associated with marketing innovation.

NIKE, TrendMicro Known as R&D and originality, DELL specializes in high customization and direct sales and SYNEX provides repair express for information goods. These businesses preserve core competence, communication and coordination and control. They are outsourcing in non-professional products or services, developing product alliance, production resource allocation for quick response market opportunity and reducing investment fund and risk. Therefore, customer will be touch by their appealing advertising and experience reality what businesses act sincerely for them.

CONCLUSION

The businesses face technology to change with each passing day, operating environment change drastically and fleeting opportunity. The businesses must change and align operation structure internally for thoroughly remold oneself into virtualization orientation and foster and learn the ability of marketing innovation externally. It looks as if an optimal model of operation reflection those businesses can play an active part in dual-competitive realm between marketplace and marketpace. The conclusion of this research related to business virtualization is not merely one orientation; however, there will be more than one mix of dimension. As a result, the performance of marketing innovation will not only be single model, but show diverse features as well. There is much truth in this, businesses, which have a variety of core competencies or more technical expertise is a good thing, but too many goals cause consumer lost focus through marketing activities. Marketing innovation is not a flash in the pan; it should be sustained, change with innovation and increase in time.

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