

SERVICE INNOVATION AND COMPETITIVE ADVANTAGE

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ABSTRACT: *Service Innovation suggests how the concept of service can be improved which is already in practice. This can be either refined competence in customer relations, channel of distribution or innovation in technology or it can be combination of all three. Investing in the development of both physical and non-physical components of products and services available for sale can lead to enhanced business prospects, ultimately ensuring success. This paper attempts to indentify core ingredients of service innovation and their impact on Online B2B industry in attaining competitive advantage with a resource based view. The difference found in organizational performance in the context of Online Business can be partially explained by Information Technology, Human Resource Management, Research & Development and strategic alliances practices and policies. Furthermore, the research also attempts to establish how proper implementation of Human Resource Management practices, experienced adoption of Information Technology and IT-enabled services, well connected and inform Research and development can all together render greater service innovation opportunities whereas strategic alliance is the mediocre variable which requires lots of efforts to impact positively on service innovation.*

KEYWORDS: *Service Innovation, Competitive Advantage, Human Resources, Information Technology, Research, Development, Strategic Alliances*

INTRODUCTION

To be more competitive, companies constantly explore the methods, tools and services which can help them in getting competitive edge. To attain the competitive advantage companies prefer to introduce more innovative services. In today's world Information Technology (IT) is acting as a corner stone for service improvement and innovation and helping companies in rendering better services to its customers and attaining competitive advantage. IT and related IT-Enabled services are helping companies to identify and bring in rapid changes in overall organizational structure from production to customer support (Agarwal & Sambamurthy 2002) backed with enhancement in competitive strengths (Sambamurthy et al 2003).

Researchers have been working on from early 1990s and presented numerous researches and theories to evident Information technology as a key element of innovation (Dewett & Jones 2001). Companies adapt IT oriented architecture to improve and enhance their Product / service offerings – this is common with many innovation activities – that involve adding new services, expanding existing ones and/or improving the service delivery process. These all initiatives are very much relevant but the success of an organization depends on how well it implements its creative ideas into productive service (Berry et al. 2006).

In this research paper we have also tried to relate Information technology as a core ingredient for Service Innovation and Competitive Advantage. To achieve our research objective we have chosen **Online B2B Industry** (Online Business to Business Matching companies / Portals) and tried to identify Key areas which are acting as growth and success criterion for Online B2B Industry and making it more lucrative business segment for global investors. The choice of Online B2B industry was influenced by the desire to investigate service firms in a highly competitive, dynamic and technology-driven environment.

INTRODUCTION TO INNOVATION

Innovation is a process of creative development or new idea implementation which is focused towards augmenting features and functionalities of a product or services to render more improved quality services to the target audience (customers) (Fichman, 2001). Innovation is also term as a successful exploitation of ideas” DTI (2004: p5). This definition includes every type and form of innovation and does not include the purpose of innovation. Freeman and Soete (1997) link innovation with the commercialization of ideas to achieve business growth. This definition created a fine line between invention and innovation as invention needs further modification and development to become useable for customers. These modifications are done by companies and organizations to earn profit besides business growth. Therefore, to bring invention from laboratories and workshops to superstores and markets companies enhance and modify those products and services.

However, services and service innovation is start working – The Implementation take place - at general since its inception. Innovation can be in product, service or process innovation; these three categories are termed as three levels of innovation (Iyytinen and rose, 2003). Above all levels, process innovation departs much economic impact as it bring in changes in the whole system of manufacturing, distribution, producing products and delivering services with efficiency to achieve economies of scale (D. smith, 2006). The improvements in existing products and services are continuous innovations and major changes or total alteration in product or service is called radical innovation. The changes and improvements in overall design and configuration are termed as Architectural Innovations (Melissa A. Schilling 2008). To be more innovative, companies keep searching new ideas and purse the development of technologically advanced processes to produce more efficient products at fast pace and keeping overall production cost effective. in the early stages of Cell phones, for example, prices of cell phones were around \$1000 in 1980 but with the development of technology over long-run these prices were reduced down to \$200 in 2004 (Melissa A. Schilling 2008: p51). Not only this but technological improvement also diffuse more than one technologies to cell phone like cell phones now also provide internet, radio, camera and several other features that maximize value of cell phones for customers.

In early researches services were count as an integral or connected part of the product whereas, in recent literatures and reviews itself now being broadly focused and new horizon of ideas and processes are investigated separately (Magnusson et al, 2003). As services are intangible element thus we need continuous feedbacks of our customers who are using the services in any form to define us the dimensions of innovation and new service augmentation and value addition. In the process of service innovation, customer participation via surveys is

getting more importance in recent studies (Alam and Perry, 2002) because it helps adjust product features according to the needs of customers. Service innovation practices include the activities that support administrative processes, operational process, customer management processes and integration in organizational cross-functioning. In all these processes technology perform vital role to support product and service development. As mentioned by Melissa A. Schilling (2008) innovation is the most important source of competitive success if combined with Technology, like Baxter, a leading medical equipment and supplies manufacturer, earned 37 percent of its 2002 sales from the innovative products introduced during past five years(p1). Furthermore technology enables the companies to introduce innovative at remarkably fast solutions that help companies to perform better in relation to their competitors because the short cycle times and innovative products enable companies to achieve the niche in almost every market.

A new and totally different concept is “**blue ocean strategy**” that argues that competition is not always right and restricts the innovation and invention as competitors only focus on moves of each other rather than customer demands and choices or they become reactive rather than proactive in providing better products and services. W.C Kim and R. Mauborgne (2004) argued that competing in overcrowded industries is no way to sustain high performance. The real opportunity is to create blue oceans of uncontested market space. Exploring new market space and creating demand through value innovation. They think competition limits the thinking of managers within the boundaries of competition. Blue ocean strategy is all about the focus on customer’s needs and creating value in service and goods to create new market. The process of innovation involves new ways of providing service with improved service delivery (Chen, J.S. & Tsou, and H.T. 2007). For example, providing babysitter service for free with cinema service because most people want to see picture by leaving there child at babysitter. This service provides value for customer hence creates new market space. As many innovation activities involve adding new services, expanding existing ones and/or improving the service delivery process, the success of an organization hinges on how well it implements its service innovation (Berry et al. 2006) to create new markets. These new markets will provide more customers and improve profitability. The very core idea of this strategy is to boost the capability of generation of those ideas that increase the value by innovation for the customer.

The ability of firms to motivate and satisfy their employees has strong relationship with innovation. The problem with J. Barney theory is that in highly competitive environment, usually all competitors has access to the similar resources. However, according to Barney (1991) first mover advantage and good market reputation may still contribute to competitive advantage. Human resource management practices are highly related to improve service quality and introduce more innovation in overall organization processes. According to S.H. Tsaor, & Y.C. Lin (2004) employees who experience positive HRM practices on the three dimensions “recruitment/selection”, “training/development” and “compensation/benefits” may thus be “paying back” their organization by being more positive, creative and initiator. We have separately discussed the importance of human resource and information technology in relation with innovation and competitive advantage.

All above models discuss the term competition and rivalry that act as a source of innovation and improved service and goods to give companies advantage over one another. However, W.C Kim and R. Mauborgne (2004) have put forward the concept of non-competitive based model with the name of blue ocean strategy. Under the context of this strategy companies need to focus on 'innovation' with an additional term 'value'. These writers said that company need to focus on the customer requirement and needs and explore new markets as well as make these element the base of innovation rather than making competitive moves in response to competitors. Those competitive moves does not provide the appropriate benefits to the customer and most of the time of companies spend in researching the move of other companies rather than thinking about new products and exploring uncontested market space. The concept of innovation and adding value to the innovation is also underpinned by the term 'knowledge economy' which describes the success businesses in terms of knowledgeable workforce with proper system of sharing and collecting information. W.C Kim and R. Mauborgne's stratgical concept is more focused to the needs of customers and satisfaction as it recommend to the firms that innovation and the value of services or goods are more important elements to discover the new market space as the needs of customer keep changing over the time. Implementation of service innovation heavily effect on the improvement of the service delivery. (Berry et al. 2006)

Service Innovation and Competitive Advantage

Researchers have discussed competitive advantage under different contexts. For example discussed that porter said firm can achieve competitive advantage on the basis of cost, product differentiation guided by five force model and support by value chain activities of an organization that includes managerial activities like HR, procurement, IT development that support marketing, inbound and outbound logistics. This competitive advantage is related to external environment and position the company accordingly to achieve it. In context, service innovation brings new products, and services that fulfill the rapidly changing customer requirements. To exploit new ideas into innovative products and Services Company needs to maximum utilization of its physical, human resources along with technological development to derive profitability and growth. (Robert and Amit, 2003). Customer satisfaction surveys is an effective tool used to measure service process innovation elements like to measure service process innovation element like quality, delivery time, assistance and after sales service (Day 1994). Operational efficiency and effectiveness is also a result of process innovation. Brand image improvement, sales growth, market ranking improvement are the outcomes of process innovation as it enable firms to launch technically enhanced and innovative products with low cost and more value to meet customer needs of reliability, quality and less expensive.

Jay Barney stressed on internal dimension which include firms resource and their role in competitive advantage and its sustainability. Jay Barney (1991) suggests that resources of firms are key players in providing sustainable competitive advantage. According to Barney (1991) valuable, rare, imperfectly imitable, and imperfectly substitutable resources could generate sustainable competitive advantage for the firm with the pre-requisite of heterogeneity and imperfectly mobile of resources among competing firms. Understanding resources of sustained competitive advantage for firms has become a major area of research (Porter, 1985). Basically these firm's resources are classified into three categories: physical capital resources, human capital resources and organization capital resources. Barney (1991)

includes physical technology used in a firm, a firm's plant and equipment, its geographical location and its access to raw material in physical capital resources. In human capital resources he includes training, judgment, experience, intelligence and relationships. Finally in organizational capital resources he includes firms' formal reporting structure, formal and informal planning and controlling and coordinating systems. In physical capital resources, technology can help to serve customer best. Building on the assumptions of heterogeneity and immobility, scholars systematically stress the strategic contributions of people's knowledge and skills to the performance of firms and sustained competitive advantage (Boxall, 1996). Thus, the RBV of any organization provides an important perspective on the debate about HRM and organizational success (e.g. Wright et al., 1994, 1998; Barney and Wright, 1998). Berry et al. (2005) has provided resourced based view of customer value and its relationship with competitive advantage. In their study they discussed what are the resources suggested best by customers to give competitive edge to a firm. The management, development and deployment with protection of firms intangible resources like (trust, reputation, intellectual property and network) and capabilities (like knowledge, culture, skills of employees and their experiences) are very difficult to imitate and hence provide sustainable competitive advantage. However, firms tangible resources like their equipment, technology can be duplicated hence do not provide sustainable competitive edge. Proper utilization of tangibles can give competitive advantage to the firm. Similarly, Continuous improvement in technology will provide sustainable competitive advantage. For example the use of customer relationship management software gives comprehensive information about customer choice and preference and provides market intelligence. Moreover, 'CRM is based on the theory that organizations that use information on customers most intelligently will serve customers' needs best and, consequently, gain competitive advantage.' (Wilford, 2000).

Role of Information Technology in Innovation Practices:

Information Technology perform significant role at operational level, as it is the core ingredient of information and its dissemination and let companies to improve and innovate performance measurement systems.

Strategic alignment suggests that the effect of information technology on performance will depend on how well the information technology strategy and corporate strategy coincide (Chan et al. 1997; Palmer & Markus 2000). The successful adoption of new information technology requires people in the entire organization to adapt and provide employee support and training, to reap greater benefits beyond the change in technology.

The technology acceptance model (TAM) of Davis (1993) tries to analyze why users adopt or reject a system as for innovation to take place it is important that people are willing and able to accept the change.

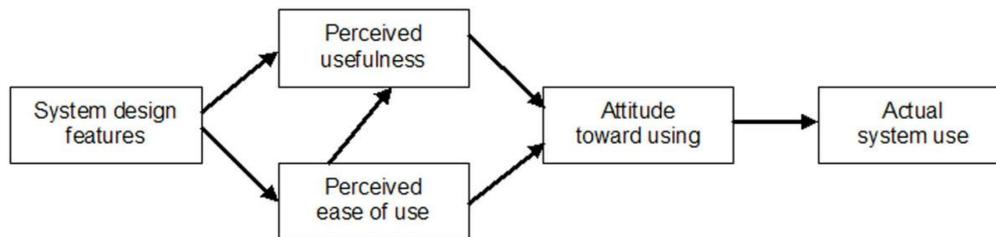


Figure 1. Technology acceptance model (TAM) by Davis (1993).

Davis (1993) stresses that this model is only usable for voluntary use of IT system, and that further factors should be included in his model, such as extrinsic motivation, user experiences with the system, and characteristics of the task to be supported by IT (e.g. complexity of a task).

Role Human Resources in Innovation:

Innovation is an important means of survival in the face of the dynamic nature of competitive environments (Han, Kim and Srivastava, 1998), a form of organizational adaptation that has been propelled by several external forces: technological developments, deregulation, globalization, shortening of innovation cycles and new buyer needs (Cunha and Verhallen, 1998).

The impact of innovation on organizational results has been generally demonstrated in empirical studies (Utterback, 1994), but relatively little attention has been paid to the extent to which HRM practices may positively contribute to innovation performance. Therefore, we have utilized the service quality model of HR as it the efforts toward quality improvement most of the time fuel up the process of innovation.

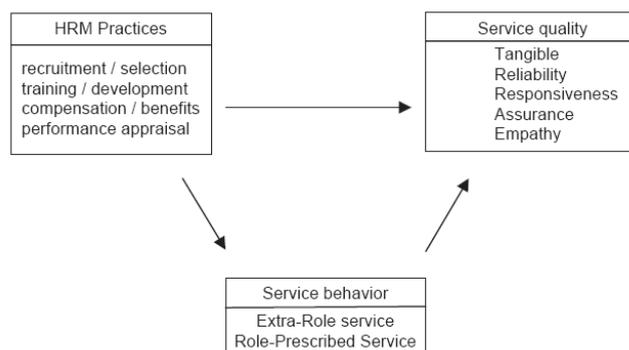


Figure: 2 HR based service quality model: Source: S.H. Tsaur, & Y.C. Lin (2004).

In figure 2 S.H. Tsaur & Y.C. Lin (2004) have related HRM practices like, recruitment and selection, training and development, compensation and benefits and performance appraisal to tangibles, reliability, responsiveness, assurance and empathy. In service behavior employee's promptness is measured. For example how willing he or she is to help customers.

Research Question:

How can Service innovation practices provide competitive advantage using a case study approach?

Research Objectives:

In this research my first objective is to highlight elements that are key contributor to the service innovation that further result in improved services hence the competitive advantage. Furthermore I would like explore the role of human capital in service innovation. Finally how important role R & D and training of employee play in process of innovation in services.

METHODOLOGY APPROACH

The strategy for this research is inductive which is guided by the literature review. This strategy is underpinned by the topic of my research that is service innovation for competitive advantage. For example service quality is highly dependent of the skills and abilities of employees and manager. More over customer perception about service quality and their identification process are most important to improve service quality. Therefore we will explore the view of managers qualitatively who are in the field so that they can share their information and ideas about the topic that will enable me to answer my research question. Key elements and factors could be determined by analyzing the information from this information to categorize the most and least important variable affecting my research question. The relationship among those dependent and independent variable will guide me to develop. I will develop the relationship model which will describe the affects of independent variable on dependant variable as Saunders, Lewis and Thornhill (2007) said that inductive strategy include the development of model from the information which is collected from the interviews and literature review.

METHOD OF DATA COLLECTION

As I have explained my view of seeing the reality that values and beliefs are constructed socially. Therefore, I will conduct interviews with the appropriate managers of TradeKey to explore my research area. This process of data collection will be started by contacting to my friends in my home country to help to gain access to the TradeKey. By this way I can save my time in gaining access to that particular company as my friend are working in some multinational organizations. Once my friend gives me his or her consent then I will send e-mail to the Human resource department of that company with his or her reference. Once I got permission to conduct the research then I will state to whom I want to conduct interviews via e-mail and telephone.

I conduct the interview with IT manager and the head of research and development department. This reason of conducting interview with IT manager is that he can understand the most current issues of customers and employee related with service innovation. Therefore he is in better position to point out the most important factors that enable the company to innovate a service. Furthermore he can state his views about the role of service innovation in competitive advantage. On the other R & D manager can explain key areas where company is focusing to bring innovation into its services. He will explore investment and research

dimension that will underpin importance of that variable which contribute to service innovation hence the competitive advantage that will enable me to provide qualitative evidence to my research. Under the support of these interviews a model of recommendation will be set up (Lindlof & Taylor, 2002). I will use open questions with appropriate probing questions to get the opinions and know the experiences of interviewees.

Limitations

This exploratory study has some limitations. These limitations are related to the data collection and its interpretations as the data is collected from one organization's managers, therefore generalization of the results is not possible. Information technology (IT) manager and Research and development Manager represent their views according to their experiences therefore findings might be very specific and stick to that particular firm. Furthermore, this study totally focused on the views of managers not of the employees therefore the finding are limited to the management point of view and does not reflect what an individual can contribute to the research and innovation to provide competitive advantage..

Online B2B Industry Overview

When B2B e-commerce began in the early 1990s, no one expected the growth explosion it experienced in the latter part of the decade. Moreover, it has continued to expand at such a rapid rate that this one-time novelty has now become, according to Jupiter Communications, a \$336 billion industry. This growth can be explained by the converging of new technology with traditional business needs. Businesses from nations all over the world now use B2B e-commerce to purchase over a trillion dollars in goods and services every year; something traditional methods and technologies designed to facilitate procurement could not accomplish.

Market Dominance of Online B2B Players in Asia Region

Online B2B marketplace worldwide is dominated by players from Asia. Around 90% of the world's top online B2B marketplaces are from Asia and only 10% are from North America. Most of the top online B2B marketplaces from Asian countries are primarily horizontal in nature and cater to multiple or almost all industries. They also have global footfalls and serve International markets.

Growth Driver for the Online B2B marketplace-International: ICT Penetration

The fast B2B e-adoption rates worldwide are directly proportional to the ICT penetration among various countries of the world. As the data indicates (e-Marketer, 2008) by 2012 nearly 50% of the world's Internet population will live in the Asia-Pacific region. The share of the world's Internet users in Europe and North America will fall, though absolute numbers will continue to rise in both regions, as the share of users in Latin America and the Asia-Pacific region both grow. So the next phase of growth for B2B E-adoption will come from Asia Pacific countries and India holds a promising future in this market.

Internet Users Worldwide, by region, 2007-2012 (Millions and CAGR*)								
SR #	Countries	2007	2008	2009	2010	2011	2012	CAGR 2007-12
1	Latin America	98.4	113.7	129.3	144.7	158.7	171.3	11.70%
2	Europe	325.0	347.5	368.8	387.8	405.1	420.5	5.30%
3	Asia Pacific	476.6	543.8	610.8	679.7	750.1	818.3	11.40%
4	North America	209.9	216.5	223.4	230.2	236.6	242.2	2.90%
5	Rest of World	42.2	46.4	50.6	54.8	58.9	62.8	8.30%
	Worldwide	1,152.1	1,267.9	1,382.9	1,497.2	1,609.4	1,715.1	8.30%

Table 2: Internet Users Worldwide. 2007-2012 (million)

Source: eMarketer Internet Users Estimates for 25 countries worldwide. January 2008

Note: eMarketer defines an Internet user as any person who uses the Internet from any location at least once a month: *compound annual growth rate (CAGR)

3.1.3 B2B E-commerce Market Size - Worldwide

Fortune 500 firms today are the primary drivers of Internet-based commercial activity. Forrester Research uses an S-curve to project the extent of e-commerce adoption. Typically, widespread adoption of a new technology is said to begin when more than 10% of companies in an industry have begun to implement it. Forrester marks this point as the beginning of 'hyper growth,' which concludes at an industry saturation point with 90% of companies having adopted e-commerce capabilities. Extrapolating this out to a regional and national level, Forrester Research has predicted that North American hyper growth has already begun in 2000, to be followed closely by Western Europe in 2001.

Table 3: Expected Beginning of Widespread E-commerce Adoption by Region Source: Computed from Forrester Research Asia Pacific hyper growth has already begun in 2003 and since then India has been witnessing traction in the E-commerce space.

SR #	Countries	Hyper Growth Year
4	North America	2000
3	Asia Pacific	2003
1	Western Europe	2001
2	Latin America	2004
5	Africa / Middle East	2005
	Eastern Europe	2005

Although the share of developing countries in total world e-commerce is predicted to grow by around 48% in 2008 (Forrester research, 2008), in absolute terms the share was around 6.7% in the year 2006 (Forrester Research) The overwhelming share of the developing countries participation in global online trade is forecasted to be concentrated in Asia Pacific region in coming years.

The value of online trade in developing countries by 2006 although modest in comparison with the global figures, amounted to more than 180% of the lowest estimates of the world E-commerce for the year 2002. Growth by region was fastest in Asia and the Pacific (109% increase between 2000 and 2005), followed by western Europe (91%), and North America (68%). The rates of growth may vary a bit, but by and far Asia and Pacific will be the fastest growing B2B e-commerce market worldwide driving on a continuously shrinking size of North American Markets.

Top Online Marketplaces Worldwide

Now-a-days, 24 leading online portals are enjoying the major market share of online B2B Worldwide such as Alibaba.com, TradeKey.com, ECPlaza.net, ec21.com, tradeindia, indiaMart and more. Almost all the leading online B2B marketplaces offer free Memberships and on an average the member base of these portals are ranging from 10,000 to 45 Million users. Around 1% to 10.2% of the registered users on these e-marketplaces are paid members. The number of paid members, especially, depends on the membership fees. A realistic growth rate for a stable e-marketplace is in the range of 10% to 25%. (International B2B Trade Portal, 2007).

B2B Buyers – Market Drivers

B2B Purchase Cycle: Phase versus Role, analysis is based on an earlier analysis done by Enquiro Search Solutions Inc. in a report titled: "Business to Business Survey 2007". Some of the key findings of this analysis are given below.

A typical B2B buyer's cycle goes through the following 4 phases:

- a) **Awareness:** This is where you first learn about needs or opportunities. You learn you have a pain that needs to be solved.
- b) **Research/Consideration:** Information and/or data gathering, defining of requirements, evaluating, screening of options, creation of a short list of candidate solutions.
- c) **Negotiation/vendor Finalization:** Reviewing vendors' offerings before making recommendations, negotiating the best price, finalizing specifics of final purchase.
- d) **Purchase:** Approval of purchase, recommendations and authorizing purchases. Completion of paper work required for procurement. Specifics of final purchase.

TradeKey Business Profile

TradeKey.com was established in 2005 as a private limited company, with an objective to facilitate global trade and bring buyers and sellers from all around the world to one common platform. With a capital investment of US \$20 Million - TradeKey.com is aiming to become the world's leading marketplace which connects traders with worldwide.

TradeKey.com is the world's fastest growing Trading Platform for International Business and the strongest E-commerce website which connects over 4 Million Importers and Exporters in more than 240 countries including USA, UK, China, Germany, France, India, Pakistan and Middle East; Quickly and Cost Effectively.

TradeKey.com welcomes over 13 Million traders every month from around the world who view more than 38 Million products, sell offers, company profiles and buying leads, which in turn generate business of worth over \$ 100 Million every month.

TradeKey.com is world's 1st B2B Marketplace that earned ISO9001 Quality Management System and ISO27001 Information Security System certifications to ensure maximum customer satisfaction, security and safe online trading. TradeKey.com has been Ranked Highest Trustable Website by our customers and Independent 3rd Party Evaluators

TradeKey.com – Quick Facts

- More than 4,200,000 Registered Traders
- Over 13,200,000 Visits by Global Traders
- Traders view over 38,400,000 Products, Services and Buying Ads
- Online Shopping Mall of over 9 Million Products
- Outlets of over 500 thousand Companies
- Highest Google Page Rank i.e. 8/10
- Ranked Highest Trustable Website by Evaluators
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Innovation Drivers at TradeKey

TradeKey is following technology based innovation strategy to produce innovative business solutions to global traders with proactively taking actions to assure secure and successful trade. In pursuing this strategy, TradeKey is heavily investing in Research and development (R & D) activities throughout the organization, making strategic alliances and partnerships with employees and doing joint ventures with globally renowned companies to render most efficient solutions.

DATA ANALYSIS

Data analysis strategy will be inductive and obtained information through interview will be arranged into different categories according to the importance. However key themes are also determined by the literature review which will be further confirmed and analyzed in the researched company context. Codes will be given to each important theme which is relevant to the research question. For example recruitment and selection can be represented by R & S. This will help me identify key variables and their effects on customer service improvement. This approach will be helpful to devise the model for customer service improvement. I will use terms like most important or important and less important to give the value to a variable. I will put the data in to different categories according to themes and unitize the information for better understanding.

Research Framework

We will give symbols to the independent variables and dependant variable to categorize the interview and literature review.

Dependant variable

CA= Competitive Advantage

Independent variables

IT= Information Technology.

HR= Human Resources.

R&D= Research and Development

SA= Strategic Alliance

Table 4: Key implications regarding the ways in which IT, HR, R&D and SA can help in Service Innovation Thus to render competitive advantage (Literature-based). Source: Own illustration. (2010).

Independent Variables	Role In Service Innovation				Dependent Variable
Information Technology (IT)	Strategic alignment suggests that the effect of information technology on performance will depend on how well the information technology strategy and corporate strategy coincide (Chan et al. 1997; Palmer & Markus 2000)	Technology Acceptance is the most crucial element which can initiate or reject the innovation Davis (1993)	IT and related IT-Enabled services are helping companies to identify and bring in rapid changes in overall organizational structure from production to customer support (Agarwal & Sambamurthy 2002)	IT adoption not only identifies and brings in changes in organization but also enhance the competitive strengths of an organization. (Sambamurthy et al 2003).	Competitive Advantage
Human Resources (HR)	Innovation backed by quality HR is an important means of survival in the face of the dynamic	S.H. Tsaur, & Y.C. Lin (2004) have related HRM practices like, recruitment and selection, training and	Innovation is also term as a successful exploitation of ideas” DTI (2004: p5). Which can only be	J.Barney (1991) stresses on the resources of firm that can contribute to achieve the competitive	

	nature of competitive environments (Han, Kim and Srivastava, 1998)	development, compensation and benefits and performance appraisal to Innovation and change acceptance	generated from quality HR	advantage and also sustain that advantage due to their rarity, inimitability and non-substitutability
Research and Development (R&D)	Sources of innovation includes investment in research and development (R & D), linkages with customers, suppliers, competitors and complements and cluster or network innovation practice are implemented at global levels. (Melissa A. Schilling, 2008)	R & D investment is accounted for innovation and creation of new knowledge and that result in innovative products and services, when traded give economic growth Paul, M. Romer and Charles I. Jones (2009)	knowledge sharing and storing which is acquired through research (internal or external), experience and customer feedback, provided broad spectrum of innovation	Research and Development is an continuous effort which requires proper storage and re-utilization of information to identify possible opportunity areas
Strategic Alliance (SA)	Kleer (2006) finds that a merger increases the incentives for innovative activity of the merging parties	Depending on the strength of the merged entity rivals increase (low strength) or decrease (substantial strength) their innovative activity	There is a lack of theoretical contribution which deals directly with the merger and innovation (Cassiman et al. 2005).	Merger can only be effective if R&D activities of the merged entity to those of the remaining competitors should be measured accurately as what would

				have happened without the merger.	
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Source: Own illustration. (2010).

After categorizing key implications that literature review holds about the role of IT, HR, R&D and SA in Service innovation and competitive Advantage we now categorize the interview accordingly to find out the degree of implementation of theory in practice. Table 5 describes the views of interviewees about innovation practices in achieving competitive advantage in online B2B industry.

Table: 5 Categorization of Interview.

Independent variable	Ways in which independent variables contributing to competitive Advantage			Dependent Variable	
<p>Information Technology (IT)</p>	<p>In online world business opportunities are open to everyone as it is easy to setup and start business online the core differentiators is the availability of the right people at right place with the right amount of technology and resources (Q1, Q2)</p>	<p>In Online B2B IT is the major contributor to achieve competitive advantage new product development and augmentation. IT helps companies to indentify new processes to improve internal efficiency and external competitiveness by reducing or controlling the overall cost (Q3, Q6)</p>	<p>In Online Business Industry, Usually an IT department is assigned with new product development ideas and identification of technology which offer ease of use to internal and external customers. (Q7)</p>	<p>IT systems not only provide better manageability but also let companies a chance to explore the world, adopt and implement innovative ideas. Technology improves Global trade in several ways. For example, automatic buyer seller matching provide in time and accurate trade meet up and let supplier explore more business opportunities in less time.</p>	<p>Competitive Advantage</p>

				(Q10, Q14)	
Human Resources (HR)	<p>The most crucial role is of the HR department as Humans are the most important assets of service based organizations, there HR department generally looking for ideas through which employee can be kept motivated. (Q7)</p>	<p>Human resource management practices are highly related to improve service quality and introduce more innovation in overall organization processes. An specific to Services industry like online business, right people are the assets of the company which not only perform their activities well but also let the organization to adopt new service augmentation through their innovative minds.(Q1,Q2, Q17)</p>	<p>HRM practices like, recruitment and selection, training and development, compensation and benefits and performance appraisal and implemented well backed by a proper review and reward system to make it tangible, reliable and responsive as everybody will try to be innovative to get more rewards. (Q17, Q18)</p>	<p>If a firm has highly skilled staff with very good attitudes, capabilities and competencies then these factors give you the relatively good advantage over competitors. For example, human beings are very different in their abilities and personalities; hence their contribution to the firm is specific. Furthermore, finding, acquiring similarly competitive people is also difficult for the competitors, therefore human resource can provide competitive advantage at least for specific period of time</p>	

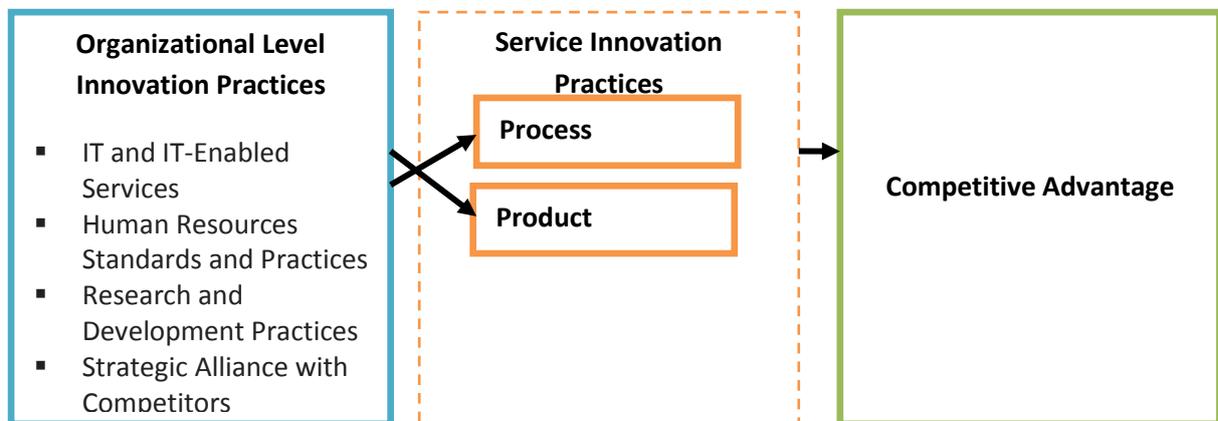
				in Online B2B industry. (Q19)	
Research and Development (R&D)	The research and development department is more concerned with the target audience as what is going on in the industry, what are customer preferences, what our competitors doing and so on so forth. (Q7)	Research and Development act as the major custodian of organizational knowledge. As the knowledge can be wasted if not properly organized or recorded in a manner to be get utilized in future. Therefore, Research and development acts as bridge between the knowledge hub and its filtering to generating more innovative results. (Q20)	Research and development in an important Source of innovation which is provided best results if includes investment in research and development (R & D), linkages with customers, suppliers, competitors and complements and cluster or network innovation practice are implemented at global levels. (Q21)	Developed countries has a common practice to identify and formulate future strategies through continuous data collection and R&D. they collect, store, utilize and re-utilize the knowledge once collected through research and then make it a base for introducing more innovation in their service offering (Q22)	
Strategic Alliance (SA)	Strategic Alliance is one of the most sensitive organizational move which might not always results in successful service innovation but most of the time it render	Strategic not always results in increased innovation because there are various factors like motivation, strategic dimension of the organization and commitment of the	Physical capital resource, equipment, technology, location and access to resources are key resources that enable the company to produce product with high quality and at low	Companies want to spend their money to identify new business opportunities and possible product / service augmentation to help them keep competitive. In online world this is	

	competitive advantage. (Q2,Q7)	employees. Once an organization gets dissolved then there are very rare chances that other organization receives the full benefits of the observed company. However, first mover advantage and good market reputation may still contribute to competitive advantage. (Q23)	prices. (Q2)	the most important element. Companies also practice mergers with small companies to acquire their intellectual capital and inherit their innovative ideas. But generally this practice normally does not get very much successful and it has a lot of other dimensions which are uncontrollable factors. (Q4, Q7)	
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Source: own illustration (2010)

From the above categorization of interview and literature review we have device following model in Figure 3 to show the effects of independent variable to the dependant variable.

Figure: 3 A relationships among IT, HR, R&D and Strategic Alliance with service innovation practice and their impact on Competitive Advantage.



(Source: own illustration (2010))

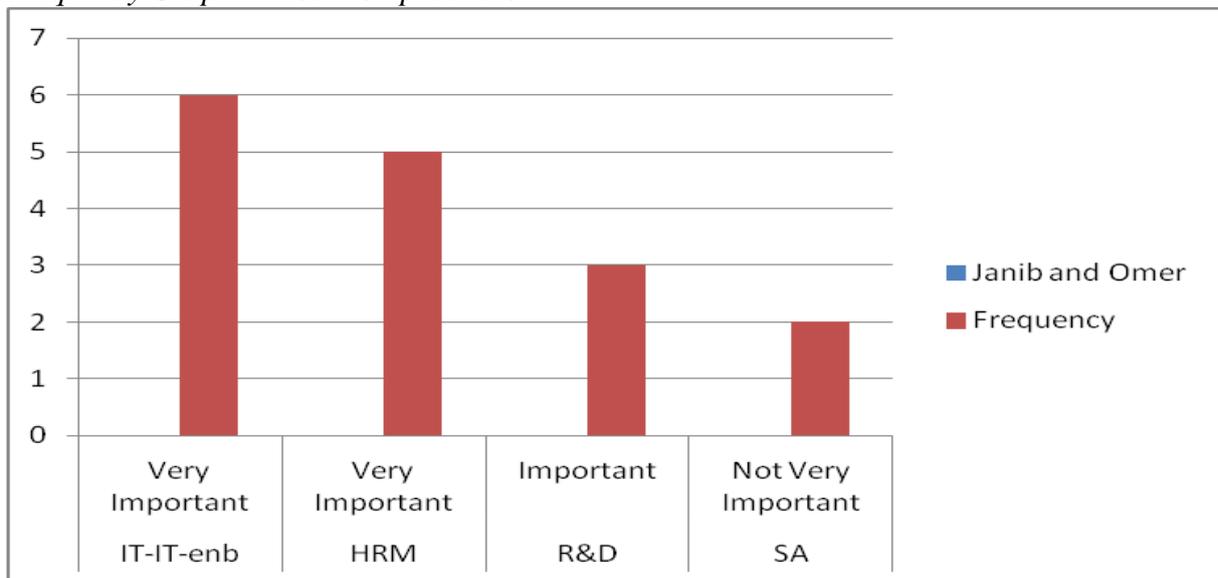
As we have now defined a model for service innovation and competitive advantage lets analyze the role of independent variable in detail to deduce the most important independent variable that can contribute to competitive advantage in TradeKey.

We have found that IT and IT Enabled innovation is the most important factor with repeated at many times in the interview. It can significantly act as the criterion in technology based service innovation and ensure better manageability and high competitiveness. The second important factor is Human Resource Management Practices that can keep employees moral high and also maintain their health to render better ideas and high productivity. In table 3 we have shown the importance of different independent variable and their frequency.

Table 6: Frequency and Importance of Independent Variables.

Interviewees	IT-IT-enb	HRM	R&D	SA
Omer (Research Manager)	Very Important	Very Important	Important	Not Very Important
Janib (It Manager)	Very Important		Important	
Frequency	6	5	3	2

Frequency Graph: Innovation practices.



The proper Research and Development and knowledge recording with proper sharing methodology and systems are also very important to indentify innovative ideas and implementation of services augmentation features to add competitive advantage. In response to the arguments during the interview it was revealed that TradeKey has a 360° methodology for service innovation.

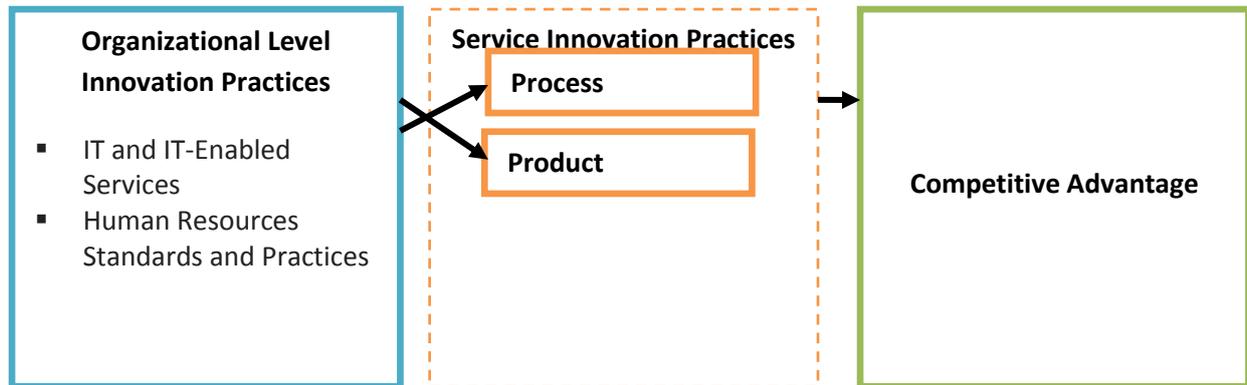


Figure: 3 A relationships among IT and HR with service innovation practice and their impact on Competitive Advantage.

Above model implications are various for the service innovation in TradeKey. As in interviews it is accepted that IT enabled service allow online b2b industry as global trade innovation. The interviewer has also added that IT systems does not only provide better manageability but also let companies a chance to explore the world, adopt and implement innovative ideas and enrich their reach to target audience (Q10). He further added that TradeKey is itself a company where IT and IT – Enabled services are the core to their global trade success and rapid organizational growth at all levels (Q11). The interviewer has also added that in past companies are habitual of searching business directories and paid thousand of dollar to multiple resources to get them some genuine business leads whereas online B2B portal like TradeKey has resolved their problem and have provided them access to millions of buyers on their finger tips (Q11). While putting light on Online B2B industry valued the right people as the asset of the company which not only perform their activities well but also let the organization to adopt new service augmentation through their innovative minds. The interviewer has also revealed the fact that if a person is gone through proper HRM practices throughout his tenure may thus be “paying back” to their organization by being more positive, creative and initiator. (Q17)

Service Innovation and Competitive Advantage

The interviewer has agreed to various concepts of service innovation and confirmed variety of concepts which are already being covered in literature review. During the interview the research manager has explained the importance of innovation Online B2B term the innovation and new ideas as the key to your success (Q1). Mr. Janib has also added that in today’s world Information Technology (IT) is acting as a corner stone for service improvement and innovation and helping companies in rendering better services to its customers and attaining competitive advantage. Agarwal & Sambamurthy (2002) finding also emphasized on the fact that IT and related IT-Enabled services are the best support of companies to identify and bring in rapid changes in overall organizational structure from production to customer support and also Sambamurthy (2003) added that the service innovation is also a source of enhancement of competitive strengths (Q11).

Mr. Omer while passing comments on Fichman (2001) theory he has have confirmed that the Innovation itself is a process of creative development or more specifically the process of new idea implementation which is focused towards augmenting features and functionalities of a

product or services to render more improved quality services to the customers (Q1). Mr. Omer further comment on the theory and have specifically commenting on Online business industry have added that seamless opportunities are available to everyone in Online Business world but winner can only be that person or company which have creative / innovative minds and can bring in more competitive service to the market.

While specifically commenting on Resource based innovation as identified by Jay Barney (1991), the interview has emphasized on availability of resources but has given great importance to their integration. He commented that there is wide variety of resources which are if combined properly and in line with the corporate objective of innovation may render competitive benefits to the company (Q2). Mr. Omer has also categorized the resources in three broad areas as Jay Barney (1991) does in his research. The core bifurcation of resources which the interviewer and Jay Barney (1991) have provided is 1) physical capital resources, 2) Human Capital and 3) organizational resources. (Q2). Mr. Omer has also categorized the physical resources and identifies equipment, technology, location and access to resources as the key resources that enable the company to produce product with high quality and at low prices. In human capital resources, the knowledge and intelligence of labor, relationship among workers and training and development are of significant importance. Which categorizing the organizational resources he included internal communication system and infrastructure which reporting systems that fasten the business operations. The interviewer has clarified that each of the resource in itself contains broad dimension of competitiveness but he concluded his point on the integration and utilization of these resources as the key. During the discussion the interviewer has also connected the person thought to the corporate objective and commented that an idea can only be useful if it is completely in line with the overall objectives of the organization (Q2, Q3, Q6).

Role of Information Technology in Innovation Practices

While commenting on J.S. Chen and H.T. Tsou (2007) theory, of interconnectivity of information Technology, innovation and competitive advantage. The interviewer ranked Information technology as the criterion for service innovation. He linked the IT related service innovation with Online Business and has claimed that this is all because of IT and related services which cause the birth of online b2b industry as global trade innovation. The interviewer has also added that IT systems does not only provide better manageability but also let companies a chance to explore the world, adopt and implement innovative ideas and enrich their reach to target audience (Q10). While commenting on Agarwal & Sambamurthy (2002) theory of overall organization change due to IT and IT-enabled services the interviewer showed his agreement with the theory and presented the example of online B2B industry growth from 1990s to till date. He further added that TradeKey is itself a company where IT and IT – Enabled services are the core to their global trade success and rapid organizational growth at all levels (Q11). The interviewer has also added that in past companies are habitual of searching business directories and paid thousand of dollar to multiple resources to get them some genuine business leads whereas online B2B portal like TradeKey has resolved their problem and have provided them access to millions of buyers on their finger tips (Q11). Mr. Janib confidently commented that companies are rarely search business directories but they prefer to contact with the online b2b service providers.

During the discussion, the interviewer also comment on the competitive advantage which companies acquire through IT and IT-enabled service innovation as we have discussed in literature review that the same has also be covered by Sambamurthy (2003). The Interview commented on the role of Information Technology performs the most significant, as it is the core ingredient which let companies to improve and innovate their performance measurement systems and help them in their decision of implementing a new idea launch of something new in the market which can make them more competitive. (Q12). Mr. Omer and Janib have given the equal importance to service innovation and integration of resources. Which specifically discussing the team buy in for IT based organizational change The interviewer given the high rank to people buy-in or engagement in the success of any IT related innovation (Q13). He also addressed the literacy issues in under developing countries and recommended proper trainings and marketing activities a tool to cop up with the change acceptance issues. He also commented on the same issue in relation to online business and confirmed that each service augmentation or change requires proper user buy-in else it might effect in on overall revenues.

While identifying the most important technology which is innovative as well as helpful in rendering quality services to the customers he ranked CRM (Customer Relationship Management) system the most highest as CRM helps companies to target their customer with most appropriateness of their services (Q15). The interviewer rejected the fact the technology innovation can always be cost effective. He described technology innovation as the expensive mean to achieve overall cost effectiveness and operational efficiency. (Q16).

Role Human Resources in Innovation

As per the literature review Han, Kim and Srivastava, 1998 defines innovation as an important means of survival in the face of the dynamic nature of competitive environments. Cunha and Verhallen (1998) put the theory on the table and combine the HRM with the organizational change acceptance tolerance and identified technological developments, deregulation, globalization, shortening of innovation cycles and new buyer needs as the external resistant to innovations.

Utterback, 1994 discussed the impact of innovation on organizational results in empirical studies, but relatively little attention has been paid to the extent to which HRM practices may positively contribute to innovation performance.

During the interview when we have discussed the human resources management and service innovation (Q5, Q17) and put light on S.H. Tsaur, & Y.C. Lin, (2004) model. The interviewer related Human resource management practices to improve service quality and introduce more innovation in overall organization processes. While putting light on Online B2B industry valued the right people as the asset of the company which not only perform their activities well but also let the organization to adopt new service augmentation through their innovative minds.

The interviewer has also revealed the fact that if a person is gone through proper HRM practices throughout his tenure may thus be “paying back” to their organization by being more positive, creative and initiator. (Q17) Measurement of employee innovativeness was

also come in discussion and the interviewer commented that if HRM practices like, recruitment and selection, training and development, compensation and benefits and performance appraisal and implemented well backed by a proper reviewable and reward system to make it tangible, reliable and responsive as everybody will try to be innovative to get more rewards (Q18).

The interviewer has also relate the human resource capabilities with service innovation and competitive advantage and has revealed that If a firm have highly skilled staff with very good attitudes, capabilities and competencies then these factors give the company relatively good advantage over competitors. As human beings are very different in their abilities and personalities; hence their contribution to the firm is specific. The interviewer has also confirmed the fact that finding and acquiring competitive people is the most difficult task for the competitors, therefore human resource can provide competitive advantage at least for specific period of time in online B2B industry or in any other service based industry (Q19). While addressing the issue of poaching, the interviewer agreed that in service industry poaching is very high (Q19) but TradeKey is the company which provides better pay packages and keep its employees motivated and provide continuous career development opportunities to its employees at all levels.

Role of Research and Development

As per our literature review we have discussed the research and development and its sources which includes investment in research and development (R & D), linkages with customers, suppliers, competitors and complements and cluster or network innovation practice are implemented at global levels. These all levels are being identified by Melissa A. Schilling, (2008). Moreover we have also discussed the span of R & D investment as how it is accounted for innovation and creation of new knowledge and that result in innovative products and services, when traded give economic growth Paul, as per the theory of M. Romer and Charles I. Jones (2009).

We have had also discussed the model of innovation proposed by Kline and further refined by Rosenberg which is generally accepted to be representative of how innovation really works if proper Research and development is performed. We have also initiated our questions related to research and development and service innovation and ask various questions from our respondents. The interviewer has shown his agreement and confirmed that research and development is accounted for innovation and creation of new knowledge and that result in innovative products and services (Q21) which also prove of Kline Model and Romers theory. He explained how TradeKey is utilizing its research and development department for identification of new service ideas and improvement identification. (Q21, Q22). He described the spreaded knowledge and intellect relationship with humans and ranked it as the core source of information. He also addressed the issue of knowledge leakage and have defined that TradeKey has put in various system on ground to record and collect knowledge at every possible event through informal learning session, suggestions, feedbacks, Survey participation and more. The interviewer has also defines the role of Research and development and how it acts as bridge between the knowledge owners and its filtering to generating more innovative results. (Q20, Q21, Q22)

The interviewer has also commented on the investment in research and development and innovation and how it provide best results and its linkages with customers, suppliers, competitors and complements and cluster or network innovation practice are implemented at global levels. He also explained the importance of human resources as the most value of element of innovation and how TradeKey continuously engage itself in connecting with internal and external customers through surveys, feedback, comments, informal sessions (observational techniques) and related methods to extract something useful out of each human resources and introduce more innovative ideas into the organization. (Q21, Q22)

Strategic Alliance and Merger

Strategic Alliance is the all time tough task and contradicting subject in innovation. As per our literature review we do not have much theoretical knowledge available on this subject. This problem has also been addressed by Cassiman (2005) in his research. Only Kleer (2006), Jost and van der Velden (2006) analyze the impact of mergers on innovative activity. As per our literature review in past studies are focused on incremental process innovation, whereas the latest ones deal with a patent race context stressing drastic innovation. Kleer (2006) finds that a merger increases the incentives for innovative activity of the merging parties. But he also addressed the dependency on the strength of these merged entity rivals increase (low strength) or decrease (substantial strength) their innovative activity. He revealed that once, organizational problems of a merger are accounted for, even the clear picture of increased incentives for the merging parties disappears. Interestingly Kleer (2006) finds that for most cases social surplus increases due to merger.

We have put the same question in discussion with our interviewer at TradeKey and he has confirmed the fact that Mergers or strategic alliance does not always results in increased innovation because there are various factors like motivation, strategic dimension of the organization and commitment of the employees (Q23). In service industry he explained that once organization get dissolved then there are very rare chance that other organization receive the full benefits of the observed company as most of the top notch employees are committed with the firm which is if dissolved cause demotivation and does let them unable to produce quality results.

If we take it away from the theoretical contributions (which however are ambiguous in their results at the present) the reviewed research also neglects the impact of mergers on the remaining competitors completely. Such as If R&D belongs to the class of strategic substitutes, competitors will change their R&D levels downward (upwards) if the merged entity increases (decreases) R&D post-merger. The point is that comparing the R&D activities of the merged entity to those of the remaining competitors does not measure accurately what would have happened without the merger. (Q5, Q23)

CONCLUSION

The core theme behind this research was to identify core ingredients of service innovation their impact on Online B2B industry in attaining competitive advantage with a resource based view. We have utilized the interviewing techniques. The Interviews support the positive effects of IT, HRM, R&D and a negative impact of strategic alliance on service innovation.

Thus, the difference found in organizational performance in the context of Online Business can be partially explained by IT, HRM, R&D and strategic alliances practices and policies.

Interviews in this research revealed that IT, HRM, R&D have a significant positive influence in service innovation, as Fichman (2001) stated. IT and IT-enabled services were found the most influential service innovation sources that can bring the most competitive and creative ideas in the organization. Both in the literature and in interviews, researcher has found that human resources management practices are the most important criterion as in service industry like online B2B human are core element of innovation. Knowledge sharing, technology acceptance and right people are most important ingredients of service innovation that ensure high competitiveness.

TradeKey is continuously investing in human capital to acquire and develop more resourceful human resources thus to render most cost effective solutions to its members worldwide. During the interview we have identified that TradeKey was started with only 29 people in 2005 and now TradeKey has achieved over 430 employees in the start of 2010 which clear investment of TradeKey in human capital acquisition and development. Above all, At TradeKey all of the departments are directly connected with each other to ensure proper communication and in time resolutions of members (customers) inquires and concerns. TradeKey has taken various initiatives to assure service innovation such as lunch of Revenue 911, CS Cell, Informal sessions and many others to facilitate better opportunities to the available human resources and timely resolution of its members (customers) issues. To acquire right talent and development of potential resources TradeKey has developed separate departments from recruiting to Training development, to assure effective acquisition of resources, TradeKey provides On-Job Practical training to its newly hired resources from day one and keep them engage in various learning related initiatives. Not only sales but all of the departments are managed under incentive based target oriented environment which assures healthy competition and more positive development of human capital.

The Interview has also sketched out TradeKey as the most IT inherited company where the finest systems and technologies are in place to facilitate competitiveness to the organization. As TradeKey is an online B2B marketplace therefore, the role of technology is crucial, TradeKey has recently introduce event based integrated CRM solution which not online provide tracking on customer events (actions it takes while surfing tradekey.com) but also act as one stop solution to resolve all customer related inquires. TradeKey is also highly equipped with advanced technology Business Intelligence (BI) solutions plus a robust modular ERP system. TradeKey systems automatically conduct customer's surveys and present reports to the management to understand customer needs.

Recommendation

Above conclusion leads the researcher to develop the model which is illustrated in figure 3. This model describes the interrelationship among the HR practices, information technology, research and development and strategic alliance and their combine indirect affect on service innovation. HR practices are highly interdependent to each other for example employee motivation is also related to the training and development of employees. Similarly autonomy and empowerment approach of management could be effective when suitable and regular

training provided to the employee in order to take decisions at their own. Furthermore performance appraisal and monitoring and recording via technology assist the service delivery by determining the training needs. Therefore coherence among HR practices is important to maximize their impact on the attitude, behaviors, motivation and satisfaction of employees to deliver the quality service. According to the model we can also recommend that HR practices and technology does not have the direct relationship with customer service but HR and technology result in desire attitudes, skill, competencies, speed and accuracy and finally employee satisfaction that are all contribute to service innovation which have also found in the literature and in the interview.

According to the model in figure 2 and 3 we can recommend to the company that it should design such HR policy and HR systems that particularly focus service innovation. For instance, training and development programs and use of technology must focus the satisfaction of customers (internal and external both).

In last we can say that HR, IT, R&D and strategic alliance support our argument that these are the ingredients of service innovation but not directly. Therefore the improvement in the service could be seen over the 2 to 3 year period not immediately. That also point out that managers should design policies with the aim of long-term planning. Company can also conduct the internal survey of employee satisfaction as it is highly related to customer satisfaction. Furthermore, company has to establish good working environment by using the ergonomics guidance to ensure the well-being of employee as it is also related to service innovation according to our findings.

In last we can say that Proper implementation of HRM practices, experienced adoption of IT and IT-enabled services, well connected and inform Research and development can all together render greater service innovation opportunities whereas strategic alliance is the mediocre variable which requires lots of efforts to impact positively on service innovation.

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