

# 한·미 기업의 인터넷 활용 비교 연구: 가치사슬을 중심으로

## A Comparison of Internet Practices between U.S. and South Korean Firms from Value Chain Perspective

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### 요 약

본 연구에서는 기업에서의 인터넷 활용과 적용이 어떻게 이루어지고 있는지를 국가와 산업별로 비교 연구하였다. 미국의 54개 기업과 한국의 135개 기업을 대상으로 한 설문 조사를 통하여 국가간 인터넷 활용 정도를 비교하였으며 산업을 제조와 비제조 군으로 구분하여 산업별로 인터넷 활용에 차이가 있는지를 분석하였다. 통계적으로 유의한 차이가 밝혀지지는 못하였지만, 연구 결과에 의하면 미국 기업은 인사관리, 자동화, 판매, 홍보 등의 업무분야에서 한국 기업보다 인터넷 활용도가 높은 것으로 조사되었으며 전반적으로 비제조 기업들이 제조 기업들 보다 인터넷 활용도가 높은 것으로 나타났다. 한국 기업의 경우 산업군별 인터넷 활용은 통계적으로도 유의한 차이를 보이는 것으로 나타났으며 특히 운영 및 영업( 마케팅 업무분야에 있어서 인터넷 활용도가 차이를 보이고 있는 것으로 분석되었다.

**키워드 :** 인터넷 활용, 인터넷 도입, 가치 사슬

### I. 서 론

In today's global business environment, companies face increasing competition and pressure to improve productivity. Numerous tools exist to improve operational efficiency and to enhance corporate competitiveness. Of these tools, the Value Chain Model is widely embraced by organizations as an effective strategic planning tool. Instead of viewing business as a collection

of independent, specialized functions, the value chain approach regards business as a series of activities that create value. A value chain approach emphasizes planning and coordination of the entire business to achieve optimal performance of the organization. One accepted view of the value chain encompasses the following five activities: (1) Inbound logistics, (2) Operations, (3) Outbound logistics, (4) Marketing and sales, and (5) Customer service. This value

chain model also encompasses support activities such as organizational infrastructure, human resource management, technology development, and procurement for each of the primary value chain activities. Information technology is considered an important element of the value chain because IT provides the linkages among interdependent value chain activities that require coordination (Porter and Millar, 1985).

Historically an overwhelming majority of the studies on IT is focused on the U.S. Because the U.S. has played an important role in advancing and implementing technologies in business, most studies on IT were highly U.S.-centric. While the U.S. is still the most dominant power in IT, there is an increasing need for studies conducted with a global perspective. However, the Internet is no longer a phenomenon restricted to the U.S. and some countries have surpassed the U.S. in certain categories of Internet use. For example, South Korea has more broadband and wireless Internet users than the U.S. although its population is less a quarter of that of the U.S. (Business week, 2003). In business South Korean firms are adopting a wide range of Internet applications at an unprecedented rate (Forbes, 2003). In addition, changes in economic climates in the U.S. and the rest of the world make it necessary to study business and IT in a global context. The rapid adoption of new technologies like the Internet by newly developed economies such as South Korea has drawn attention of technology vendors and investors. These developments suggest the need for studies that compare business and IT practices between different countries (Whitley, 1992).

The Internet adoption and utilization in busi-

ness varies among countries and cultures (Teo, Lim and Lai, 1999). In addition, managers in different countries and cultures interpret and react differently even when they use the same management concept such as the value chain model (Chang and Hwang, 2002). While the cultural difference in technology adoption and management is an important factor in studying IT, there is little or no effort to understand the difference between countries in the way they adopt and utilize the Internet. In this work we explored the following question: How firms utilize the Internet. To answer this question we surveyed 54 firms in the U.S. and 135 in South Korea. We analyzed the data to see if the answer to this question varies by country (U.S. and South Korea) and industry (manufacturing and service). We believe that this comparative study will help both academicians and practitioners understand the differences in Internet practices in different countries.

The remainder of this paper is organized as follows: A literature review for value chain and Internet and research questions are provided in the next section. Next, we discuss the research design and data collection process before presenting research findings. The last section summarizes and concludes the study.

## II. Literature review and research questions

The Value Chain Model first proposed by Porter in 1985 has been widely adopted by practitioners and extensively studied by researchers. These studies have recognized numerous direct and indirect benefits of the Value Chain Model, including reduced transaction cost with stream-

lined processes (Malone, et al., 1987), tighter integration of products and services (Normann, 1993).

The concept of value chain has been reinforced by increasingly sophisticated and prevalent information technologies, particularly the Internet. The Internet has the power to profoundly change the market dynamics making conventional rules of competition obsolete and allowing new value chains to form with new players, products and services in the market (Evans and Wuster, 1997). To reflect and address increasingly dynamic environments, several enhancements were proposed to the value chain model. Normann (1993) introduced the Value Constellation concept to reflect constant reconfiguration of roles and relationships among a constellation of players – suppliers, partners, and customers. Such a tight and yet dynamic integration of a value chain through the use of IT can be elevated to the creation of a virtual organization (Wang, 2000). This virtual organization is responsible for meta-management beyond the individual organizational level in order to optimize the benefit for the entire organizational network.

Tallon, Kraemer, and Gurbaxani (2000) developed a process-oriented model to assess the impacts of IT on critical business activities within the value chain. The model incorporates corporate goals for IT and management practices as key determinants of realized IT payoffs. Using survey data from 304 business executives worldwide, they found that corporate goals for IT can be classified into one of four types: unfocused, operations focus, market focus, and dual focus. Also, they confirmed that these goals were useful indicators of payoffs from IT in

that executives in firms with more focused goals for IT perceive greater payoffs from IT across the value chain. In addition, they found that management practices such as strategic alignment and IT investment evaluation contribute to higher perceived levels of IT business value.

IT such as Internet impacts different business activities within the value chain (Tallon, Kraemer, and Gurbaxani, 2000). For example, for process planning and support, Bakos and Treacy (1986) argue that IT improves planning and decision making by improving organizational communication and coordination and by enhancing organizational flexibility. For supplier relations (inbound logistics), Mukhopadhyay, Kekre and Kalathur (1995) mention that IT can improve communication (EDI), quality control (TQM) and delivery techniques (EDI/JIT), leading to competitive advantage. Also, McFarlan (1984) explains that use of IT coordinates supplier linkages and reduces search costs. Kelley (1994) shows that for production and operations, the use of IT delivers enhanced manufacturing techniques through computer-aided design. Also, Banker and Kauffman (1991), Malone (1987), and Porter (1985) argue that improvement in the production process can lead to economics of scale in the delivery of products and services. In addition, Pennings and Buitendam (1987) prove that the IT use of advanced manufacturing processes can enable a greater range of products and services. For product and service enhancement, Barua, Kriebel and Mukhopadhyay (1995) argue that IT can be used in the development of new products and services. Also, Bakos and Treacy (1986) emphasize that IT can enable products and services to be uni-

quely differentiated in a variety of ways. For sales and marketing support, Pine, Peppers, and Rogers (1995) show that the development of new products and services can enable an organization to identify and serve new market segments. Also, Porter and Millar (1985) explain that IT can be used to track market trends and responses to marketing programs. Finally, for customer relations (outbound logistics), Ives and Learmonth (1984) argue that IT can be used to establish, sustain, and improve customer relationships. In addition, Porter (1985) shows that improving customer relations can result in improved market share.

The advent of the Internet and electronic commerce is changing the role and dynamics of the value chain (Hackney, et al., 2002). Some believe that the proliferation of the Internet provides consumers increased power and thus restructures and redistributes the value chain (Benjamin and Wigand, 1995). Furthermore, electronic markets may lower coordination and distribution costs and may even eliminate market intermediaries, as consumers directly access manufacturers. On the other hand, others predict that the advent of electronic commerce can reinforce the position of traditional intermediaries, while it may also promote the growth of a new generation of intermediaries (Sakar, et al., 1996). Firms may take advantage of the Internet to gain strategic advantage by creating business-to-business (B2B) value chain to bypass others in the value chain (Evans and Berman, 2001; Chan and Artmangkorn, 2002). This B2B e-commerce in turn brings in changes in organizational structures, communication processes and the relationships among businesses (Mayer-Guell, 2001). Thus some argue that the

role of intermediaries will be even more important in an electronic value chain (Janssen and Sol, 2000).

It has become apparent that the recent emergence of electronic commerce is having a profound impact on business, but there is neither a clear understanding of how electronic commerce is changing the structure and dynamics of the market and nor an effective framework for deciding appropriate business models (Fisher, 1997). Researchers and practitioners have placed too much focus on technologies and business applications with a limited scope (Barua, et al., 2001). As the Internet is making it possible to integrate different business functions and players together in a tight and yet flexible value chain, it is imperative to understand business and the market in a more holistic view.

### III. Research Questions and hypotheses

Building on the preceding discussion, we conducted an empirical study in an attempt to address the following question: Do companies in different countries and different industries use the Internet differently?

Today no one questions the strategic significance of the Internet and the impact of the Internet is widely recognized and documented in many facets of business - market offering and marketing activities (Palmer and Griffith, 1998), buyer's search cost (Bakos, 1991), inventory and monitoring control (Bakos, 1991), cost savings and internal restructuring (Clarke, 1999), and customer relations (Mishina, 1998) among others. The Internet, when successfully implemented, is believed to serve as a sounding

board to create and sustain a competitive edge over competition (Berthon, et al., 1996; Clark, 1997; Hoffman and Novak, 1996). We believe that how management views the Internet has a significant impact on how an organization actually uses it. As evidenced in many studies, the utilization of a new technology by management is a crucial indicator of how successfully the new technology will be diffused in an organization (Gibson and Nolan, 1974; McFarlan and McKinney, 1984; Nolan, 1979; Zmud, 1982 and 1984). In turn, successful utilization of the technology will help business improve its performance.

If a company wants to deploy the Internet as a strategic tool, it must first assess its business environment and the strategic position relative to its domestic and international competitors (Gadiesh and Gilber, 1998). Some managers may find it beneficial for the firm to focus on product development, while others may strengthen their competitive edge by emphasizing marketing and customer services (Carr and Tomkins, 1996; Cooper, 1996). In a global market, companies may also have to take cultural differences among different countries into consideration. Business environments can vary from country to country depending on various factors. Therefore, it is likely that firms in an advanced economy, such as the U.S., would adopt and utilize the Internet differently from those in a newly industrialized market, such as South Korea.

In addition to the effects of overall business environment on the choice of value chain analysis implementation, we also predict a potential industry effect within each country. The selection of Internet application may depend on

differences among industries, not just among countries. For distinct industries, the level of competition, specific comparative advantages, and the nature of operations could differ significantly. Given their limited resources, one would expect corporate management to evaluate carefully its own operation before committing to any new management to evaluate carefully its own operation before committing to any new management system (Chang and Hwang, 2002). Therefore, compared to companies in the manufacturing industry, service firms are, in general, concerned about providing valuable services to customers to maintain their comparative advantages. They may pay more attention to establishing marketing channel, developing product distribution logistics, and providing high-quality customer services. Accordingly, we hypothesize:

Hypothesis 1: U.S. companies utilize Internet differently in each value chain category from South Korea companies.

Hypothesis 2: The way the Internet is utilized varies by industry within each country (U.S. and South Korea)

## IV. Research design and data collection

### 4.1 Data Collection Processes.

The survey was conducted in the U.S. and South Korea in 2003. In the U.S., the questionnaire was sent by mail to CIOs and IS directors at over 470 firms located in the Dallas, Texas metropolitan area. After three rounds of

mailing, we received 54 usable responses. Twenty questionnaires were returned as undeliverable and three managers declined to participate. The response rate was about 12.1 percent.

In South Korea after identifying the mailing addresses of the firms to be surveyed, the questionnaire was delivered and picked up by hand, resulting in very high response rates. The survey targeted a range of business executives in these firms including, but not limited to, the CIO, IS managers. The number of questionnaires collected was 156 and the number of usable questionnaires was 135. The response rate was about 86.5 percent.

## 4.2 Research Instrument

The research instrument was adopted and revised from Koh (2004). The survey has two sections. The first section contains questions pertaining to the nature of the firm and the annual sales of the responding companies. Additional questions regarding each respondent's current position and years of experience in that position are also included.

The second section of the questionnaire makes inquiries about the firm's current Internet utilization with 24 items derived from the value chain model and organized around three major categories (logistics, operations, and sales & marketing). In order to measure the utilization of the Internet from value chain model, we selected a framework suggested by Koh (2004). The framework recognizes three categories (logistics, operations, and sales & marketing) and nine sub-categories (alliance, trading, database, human resources, communication, automation, sales, advertising, and marketing). Each

question assesses the extent to which a company utilizes the Internet for the given function using a scale from 1 to 7, whereas 7 represents the utilization of the Internet to the full extent and 1 indicates the utilization to the minimum extent.

Also, reliability was assessed using Cronbach's alpha and, in each case, as shown in <Table 1>, was found to exceed a suggested minimum of 0.80 excepting trading activity (Cronbach's alpha = 0.7310) (Bollen, 1989).

<Table 1> Reliability measures

Variables		#Items	Reliability
Logistics	Alliance	2	0.8840
	Trading	4	0.7310
Operations	Database	4	0.8192
	Human Resources	1	
	Communication	3	0.8922
	Automation	4	0.8416
Sales & Marketing	Sales	2	0.9339
	Advertising	2	0.8962
	Marketing	2	0.9064

## V. Results

In this section, we first present the descriptive information of the responding firms. Then, we conduct t statistics to test the population means of Internet utilization by country. The purpose of conducting t statistics is to divulge the statistical difference about the population means of the country on Internet utilization from the value chain analysis in the United States and South Korea. Also, we report the statistical difference about the population means of Internet utilization by industry within each country.

## 5.1 Descriptive Information

Industries represented by the responding companies are summarized in <Table 2>. Among the U.S. companies, 39.62% are manufacturing companies and 60.38% are service companies. For South Korea companies, 73.33% are manufacturing companies and 26.66% are service companies. The average annual gross revenue of U.S. and South Korea companies are \$ 204.98

million and \$ 175.03 million, respectively. Most of the individuals who completed the survey hold relatively high positions in their companies. On average, respondents from both countries have similar longevity in their companies, with 15.14 years for U.S. participants and 11.53 years for their South Korea counterparts. Thus, we expect that the respondents have sufficient knowledge of their firms' current Internet applications to provide informative answers.

<Table 2> Descriptive statistics

Category	U.S. (%)	Korea (%)	Total (%)
<i>Industry</i>			
Manufacturing*	39.62	73.33	63.83
Service**	60.38	26.66	36.17
<i>Revenue</i>			
Less than \$10 million	4.20	5.97	5.50
\$10 million~less than \$50 million	16.70	39.55	33.50
\$50 million~less than \$100 million	27.10	17.91	19.80
\$100 million~less than \$500 million	41.70	27.61	31.30
\$500 million~less than \$1 billion	8.30	4.48	6.00
\$1 billion or more	2.10	4.48	3.80
<i>Employment</i>			
Less than 100	3.90	14.07	11.29
100~less than 500	35.30	57.04	51.08
500~less than 1,000	11.80	17.04	15.59
1,000~less than 5,000	37.30	10.37	17.74
5,000~less than 10,000	7.80	0.74	2.69
10,000 or more	3.90	0.74	1.61
<i>Years with company</i>			
Less than 5 years	26.40	39.69	35.87
5 years~less than 10 years	26.40	26.72	26.63
10 years~less than 15 years	20.80	25.95	24.46
15 years~less than 20 years	11.30	6.87	8.15
20 years~less than 25 years	7.50	0.76	2.72
25 years~less than 30 years	3.80	0.00	1.09
30 years or more	3.80	0.00	1.09

Note) \* Includes manufacturing, chemicals, construction & engineering, biotechnology & pharmaceuticals

\*\* Includes services, logistics & transportation, retail, distribution, hospitality & travel, banking, insurance, financial services

## 5.2 Results on Internet Utilization

Since our interest is to understand how U.S. and South Korea companies utilize the Internet according to the value chain model, we first explore the Internet utilization by examining all three categories (9 sub-categories) using *t* statistics with country as the independent variable. Based on the results of our reliability measures, we formed composite variables for each of the nine critical business activities by averaging the items under each activity heading. As shown in Table 3, the results of this analysis identify no significant difference at 5% level between the two countries in the way they use the Internet

according to the value chain model.

Also, we report descriptive findings on Internet utilization among value chain activities (3 categories and 9 sub-categories) by mean values. The results show that, on average, U.S. companies utilized Internet more extensively in such areas as human resources (3.78 vs. 3.53), automation (3.65 vs. 3.41), sales (4.15 vs. 3.82), and advertising (4.72 vs. 4.50) than did South Korea companies. On the other hand, for South Korea companies, they utilized Internet more extensively on alliance (3.79 vs. 3.23), trading (3.36 vs. 3.27), database (3.39 vs. 3.15), communication (4.50 vs. 4.45), and marketing (3.75 vs. 3.56) than did U.S. companies.

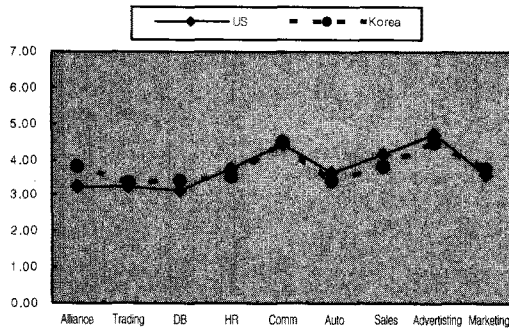
<Table 3> Internet utilization by country

Category	Sub-category	U.S.		Korea		t statistics	p value
		Mean	S.D.	Mean	S.D.		
Logistics	Alliance	3.23	1.59	3.79	1.89	1.4546	0.1489
	Trading	3.27	1.09	3.36	1.47	0.2952	0.7687
	Overall	3.29	1.15	3.48	1.21	0.6321	0.5296
Operations	Database	3.15	1.53	3.39	1.52	0.5699	0.5709
	Human Resources	3.78	1.68	3.53	1.83	-0.7414	0.4599
	Communication	4.45	1.57	4.50	1.77	0.1596	0.7979
	Automation	3.65	1.25	3.41	1.68	-0.7421	0.2799
	Overall	3.62	1.35	3.64	1.28	0.0570	0.2952
Sales & Marketing	Sales	4.15	1.99	3.82	2.17	-0.6904	0.1480
	Advertising	4.72	1.67	4.50	1.93	-0.6681	0.5696
	Marketing	3.56	1.92	3.75	2.00	0.4631	0.3655
	Overall	4.21	1.72	4.00	1.85	-0.4869	0.6280

The extent of these differences is more readily seen in <Figure 1>, which depicts the means (from <Table 3>) of the Internet utilization for each country across each of the nine business activities. What this figure clearly illustrates is the existence of “trend” of Internet

utilization. Specifically, both U.S. and South Korea companies utilized Internet the most extensively on sales & marketing category (4.21 for U.S. and 4.00 for South Korea), followed by on operation category (3.62 for U.S. and 3.64 for South Korea) and logistics category





〈Figure 1〉 The mean of Internet utilization by country

(3.29 for U.S. and 3.48 for South Korea). This finding provides that the primary focus of U.S. and South Korea companies in Internet utilization occurs in sales & marketing - activities that are central to a business strategy that emphasized market practices. The analysis of the “peaks” across each country in Figure 1 shows that both countries have almost same two peak points: communication (4.45 for U.S. and 4.50 for South Korea) and Advertising (4.72 for U.S. and 4.50 for South Korea). As further in-

dicated by the mean values for Internet utilization in <Figure 1>, U.S. companies showed higher scores in most sales & marketing category (4.21 vs. 4.00) than South Korea companies, and firms in South Korea reported higher mean values in logistics category (3.48 vs. 3.29) than U.S. companies.

<Figure 2> shows the means (from <Table 4> and <Table 5>) of the Internet practices for each industry within U.S. and South Korea countries (U.S. manufacturing firms, U.S. service firms, South Korea manufacturing firms, and South Korea service firms) across each of the nine business activities. Overall, each four different firm depicts the almost same “trend” and “peaks” as shown in <Figure 2>. The unique trait in <Figure 2> is the existence of “levels” of Internet utilization across each of communication, automation, sales, advertising, marketing activities. Specifically, South Korea service companies indicated the highest “level” of Internet utilization, followed by U.S. service

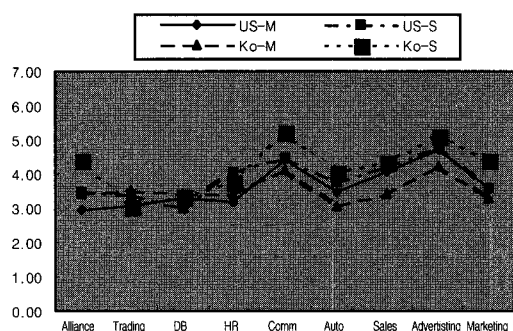
〈Table 4〉 Internet utilization by industry in U.S.

Category	Sub-category	Manufacturing		Service		t statistics	p value
		Mean	S.D.	Mean	S.D.		
Logistics	Alliance	2.97	1.59	3.47	1.60	-0.8939	0.3785
	Trading	3.04	1.08	3.43	1.11	-0.9310	0.3601
	Overall	3.06	1.01	3.49	1.25	-0.9594	0.3469
Operations	Database	3.30	1.62	3.00	1.48	0.4341	0.6691
	Human Resources	3.20	1.37	4.07	1.76	-1.6667	0.1028
	Communication	4.44	1.47	4.45	1.66	-0.0101	0.9920
	Automation	3.50	1.02	3.75	1.40	-0.5738	0.5700
	Overall	3.66	1.11	3.57	1.68	0.1370	0.8925
Sales & Marketing	Sales	4.07	1.95	4.21	2.06	-0.2066	0.8377
	Advertising	4.68	1.59	4.74	1.74	-0.1150	0.9089
	Marketing	3.57	2.01	3.56	1.91	0.0142	0.9887
	Overall	4.25	1.73	4.19	1.76	0.0943	0.9256

〈Table 5〉 Internet utilization by industry in South Korea

Category	Sub-category	Manufacturing		Service		t statistics	p value
		Mean	S.D.	Mean	S.D.		
Logistics	Alliance	3.44	1.78	4.42	1.95	-2.1244	0.0373*
	Trading	3.51	1.36	3.05	1.68	0.9449	0.3504
	Overall	3.55	1.23	3.35	1.22	0.4757	0.6371
Operations	Database	3.41	1.54	3.35	1.54	0.1156	0.9085
	Human Resources	3.40	1.69	3.78	2.08	-0.8592	0.3929
	Communication	4.13	1.73	5.22	1.65	-2.6531	0.0098*
	Automation	3.06	1.51	4.04	1.83	-1.9950	0.0520**
	Overall	3.32	1.20	4.10	1.29	-1.7328	0.0938**
Sales & Marketing	Sales	3.41	1.96	4.36	2.35	-1.5274	0.1335
	Advertising	4.25	1.79	5.09	2.16	-1.9485	0.0544**
	Marketing	3.32	1.78	4.43	2.19	-2.0434	0.0461*
	Overall	3.46	1.49	4.63	2.07	-1.9914	0.0543**

Note) \* Significant at  $p < 0.05$ , \*\* Significant at  $p < 0.10$



〈Figure 2〉 The mean of Internet utilization by industry in each country

companies, U.S. manufacturing companies, and finally South Korea manufacturing companies.

## VI. Summary and conclusion

This paper compared two countries (U.S. and South Korea) and two major industry groups (manufacturing and service) regarding the pattern of Internet utilization and the impact of the Internet on organizational performance from the

value chain perspective. Based on data collected from 54 firms in the U.S. and 135 in South Korea, the major findings in this study were summarized as follows.

First, no statistical difference was found in U.S. and South Korean companies, regarding the utilization of the Internet in the value chain activities. Both countries showed the highest Internet utilization in sales & marketing category. U.S. companies showed relatively higher scores in the sales & marketing category than South Korea companies, and firms in South Korea indicated relatively higher mean values in logistics category than the U.S. counterparts. The firms in service sector utilized Internet more extensively than manufacturing companies for both countries, although the difference was not statistically significant. Although U.S. companies' utilization of the Internet in manufacturing and service sector did not show statistical difference in all of the value chain categories, the South Korean firms' utilization of

the Internet between the two industry sectors showed statistically significant difference (at 0.05 level) in the alliance, communication, and marketing value chain category.

The above finding implies that the level of Internet utilization can be still different although the overall average of the Internet utilization was not statistically different between the two countries. In terms of the variance of the Internet utilization, the gap of Internet utilization between service and manufacturing sector in South Korea was bigger than that in the United States. If we might assume that the level of technology utilization of a country evolves through "low utilization," "higher utilization with much variance among industries," and "higher utilization with smaller variance among industries" path, our comparison study results could indicate that the Internet utilization in developing countries such as South Korea is evolving but still fluctuating. However we could expect the variation will be smaller and stabilized, as the level of Internet utilization progresses. We presume that the study findings might provide some useful information for other country researchers to compare and/or forecast their level of Internet utilization.

The study has some research limitations. The data used in this study was validated following a rigorous procedure in each country. However, there could be potential risk in interpreting the empirical study results in that respondents' perception from different countries may be different due to cultural differences, and the sample weights in service and manufacturing sector from the two countries were different (i.e. For U.S., 39.62% in manufacturing and 60.28% in service industry, For South Korea, 73.33% in

manufacturing and 26.66% in service industry). Future research will be needed to investigate possibility of perceptual errors or differences in Internet utilization due to cultural and environmental differences. This comparison study was conducted based on data collected from only two countries. Involving more countries for comparison study will be required to provide more generalized insight on Internet utilization in different countries. Finally, the study was focused only on the utilization of Internet, whereas readiness or acceptability of performing organization and the impact of using Internet may vary from industry to industry and country to country. More comprehensive study will be needed with consideration of Internet utilization, readiness for Internet adoption, and impact of using Internet.

† 이 논문은 2003년도 건국대학교 학술진흥연구비 지원에 의한 논문임.

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## A Comparison of Internet Practices between U.S. and South Korean Firms from Value Chain Perspective

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### Abstract

The Internet is now an ubiquitous technology in business and possesses the potential to make the concept of value chain into an attainable reality. We posit that the way the Internet is utilized, the extent of the Internet's impact on business performance, and the extent the firms are prepared to take advantage of the Internet varies from country to country and from industry to industry. Based on data collected from 54 firms in the U.S. and 135 in South Korea, we compared the two countries (U.S. and South Korea) and two major industry groups (manufacturing and service) regarding the pattern of Internet utilization on the Internet from a value chain perspective. The findings show that U.S. companies utilize the Internet more extensively in such areas as human resources management, automation, sales, and advertising than the South Korean counterparts. However, we did not find a statistically significant difference in the way the two countries use the Internet within a value chain model. We also compared Internet practices by industry sector (i.e., service vs. manufacturing) within each country. The results show that firms in the service sector tend to use the Internet more extensively than the manufacturing counterparts in both countries. Particularly in Korea the difference between the sectors was significant in the extent to which they utilized the Internet to support such business activities as inter-organizational alliance, communication, and marketing.

**Keywords:** *Internet Utilization, Internet Adoption, Value Chain*

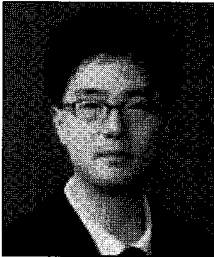
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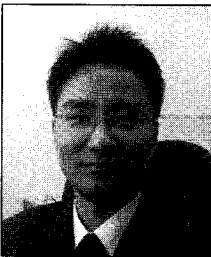
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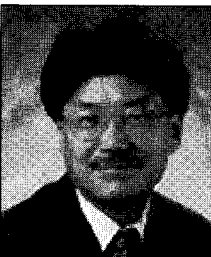
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고려대학교 산업공학과를 졸업, 동 대학원에서 석사를 취득하고, University of Wisconsin-Madison에서 Decision Science로 박사학위를 취득했다. 현재 건국대학교 경영정보학과 부교수로 재직하고 있으며 주요 관심분야는 정보기술 관리, 정보시스템 평가, IT 아키텍처 등이다.



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현재 건국대학교 상경대학 경상학부 교수로 재직하고 있다. 미국 University of Memphis에서 경영정보학분야로 경영학석사를 받았고 미국 University of North Texas에서 경영정보학분야 경영학박사를 받았다. 국제마케팅 전자상거래분야에서 강의를 하고 있으며 관심연구분야는 RFID, e-마케팅 등이 있다.



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현재 미국 University of North Texas 경영정보학과 교수로 재직하고 있고, University of North Texas 산하 ISRC 연구센터 부소장을 맡고 있다. 미국, Bowling Green State University 경영학석사, University of Georgia에서 경영정보학분야로 경영학박사를 받았으며 RFID, 전자상거래, e-government 등에서 활발히 연구를 하고 있다.

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