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Hung Kook Park
Sanmyung University

Ki Jung Chun
Sangmyung University

Joa Sang Lim
Sangmyung University

Jung Ki Min
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ABSTRACT

Since their conception, EIS have been developed and adopted in many firms. The importance of EIS is now increasing with the need of accessing data from many sources under the high-velocity environment. Although many of the Korean firms are now in the process of introducing EIS with the faster growing economy, most research has been conducted on the use of EIS in Western firms. This study aims to explore the current state of EIS usage in Korean firms and make a comparison with that of the United States. Based upon Watson et al. (1992), a questionnaire instrument was constructed. The questionnaires were distributed to 136 Korean companies that were reported to use EIS and 50 of the questionnaires returned. We found that there were many differences in the use of EIS between Korea and the United States. This was mainly due to the fact that the use of EIS in Korea was at a very early stage and executives in Korea did not realize and/or understand the benefits from the use of EIS yet.

INTRODUCTION

Computers are indispensable and now a vital pivot for business operations. Managers may rely on a reservoir of information systems, the features of which may vary depending upon the nature of tasks and activities given to themselves (e.g., TPS, MIS, DSS, and ES). Despite such availability of various information systems, the computer support for senior executives was rather insufficient. EIS may play a key role in that they provide timely and accurate information in a user-friendly manner for executives' decision making (Rockart & De Long, 1988). Although EIS have been reportedly much used in the companies of the United States (Banerjee & Alison, 1995), there has been little interest in EIS among Korean practitioners and researchers. Only recently,

EIS appear to be rapidly adopted in practice and thus, there have been only a few empirical EIS studies that were conducted for Korean firms (Choi et al., 1993; Fitzgerald, 1992). Choi et al. (1993) conducted a field study for Korean firms that included 40 medium and small sized companies across eight industries. Lee at al. (1993) surveyed 22 firms across eight industries, but their size was not reported. Although these studies enhanced our understanding as to the usage of EIS in Korean firms, we are still unsure how the current state of EIS usage differs from that of the United States. This study aims to tap into the current state of EIS usage and compare the results with those obtained for the firms of the United States (Watson et al., 1992). The research questions include: (1) How are EIS used in Korean firms? and (2) Is the way of usage much different from that of the Unites States?

The next section reviews literature relevant to the research questions raised above. In a following section, the research methodology adopted in this study is presented. Then we provide the results of this study and make comparisons with those of the 1991 United States survey (Watson et al., 1992). This paper concludes with discussion and further research directions.

RELEVANT LITERATURE

Managers are required to perform many tasks which may include (1) immediate response to unexpected situations, (2) activity to increase management effectiveness and results, (3) activity to allocate resources and, (4) activity to resolve organizational internal and external problems. For these management tasks, EIS provide very friendly interface to access a variety of information and thus, let the end users know exactly what is going on not only in their organizations, but also externally across industry, market, and economic environments (Bird, 1991; Crockett, 1992; Friend, 1986; Moynihan, 1993; Schaeffer & Turban, 1987).

There have been a number of field studies on the usage of EIS in practice. Young and Watson (1995) measured EIS acceptance as the percentage of uses of the systems in daily routine and found that EIS acceptance was rather related to (1) ease of use, (2) the number of features, and (3) support staff characteristics. Similarly, Watson et al. (1995) conducted a field study of 43 organizations of the United States. Their main findings include that an easier and faster access to the information was the most important contribution of EIS and also highlighted the specification of user requirements at the early stage of system development. In their survey of Fortune 500 companies, Nord and Nord (1995a) reported that the users of EIS included not only CEO and top managers for whom the systems were originally developed, but also vice presidents and middle managers. The factors of determining EIS acceptance centered around such issues as ease of use (graphics, the number of keystrokes) and decision support tools. Nord and Nord (1995b) also reported that about a third of the respondents currently used EIS (or ESS: Executive Support Systems) and EIS impacted most for the managerial tasks of decision making, scheduling, E-mail, and electronic briefing. Benard and Satir (1993) conducted a filed study for 493 Canadian Financial Post companies. They reported somewhat contradicting results to those in the earlier

studies. That is, little contributing were such factors as initiation by users, senior management involvement and use of consultants that seemingly relevant to the satisfaction with EIS.

Taken together, these studies strongly indicate that EIS are increasingly accepted in decision making and their adoption at practice has been noticed at various levels of managers. This may be due to the fact of ease of use, data accessibility to diverse and dynamic information and a variety of decision support features. However, as reviewed earlier, most filed studies were conducted for the western firms (e.g., U.S., Canada) and few comparative studies between Western and Oriental firms were reported. The economic growth of some Asian countries was so startling in the last decade and most contributing factors may include culture in management and government, unique and different from that of Western countries (Lim et al., 1996). Now may be the right time to raise a question - is the way of EIS usage in Oriental firms much different from that of Western ones? This study aims to explore the current state of EIS in Korea and make a comparison of such results with those of the United States.

RESEARCH METHODOLOGY

Design and Sample

The sample of this study was chosen from two groups of business organizations in Korea. The first group included the organizations who took part in the EIS seminars in 1993 and early 1994. One hundred and nine questionnaires were mailed to this group. The second group consisted of the 48 organizations who were the customers of Korean suppliers of EIS tools (e.g., Command EIS, Lightship). Such sampling was believed to comprise most EIS users in Korea. Each organization was carefully checked to insure that it was included in only one group. Since twenty-one organizations appeared in two groups, the subjects were 136 in total.

Instrument

The instrument of this study was based upon the instrument of a 1991 U.S. survey (Watson et al., 1992) which was translated into Korean. The survey questionnaires consisted of 5 parts in 15 pages. The first part of the questionnaire described the definition of EIS, and the second part included questions as to the organizational information of the sample. The third part asked about the development, operation, support, and function of EIS used, and the fourth part was related to investment decisions of related information technology. The last part was designed to tap into the user satisfaction of EIS currently installed and being operated. A 5-point Likert scale was used with a five-point being awarded to the most important and a one point, the least.

Procedure

The correspondence of the sample was obtained from the list of membership which was asked to fill out at the entrance to the seminar for the first group (seminar participants). The mailing addresses of the second group (EIS tool users) were obtained from the vendors of the

tools. The questionnaire was then distributed to all 136 subjects in April, 1994 with a reply envelope and postage included. The firms which did not reply in time were telephoned to fill out the questionnaire and mail it back to us.

Analysis Methodology

Of 136 questionnaires, 50 returned it with a response rate of 36.8%. Prior to any statistical analyses, data were examined for errors and those partially completed were removed from further investigation. Of 50 respondents, 27 companies which developed and were at the time of the survey operating EIS answered all items of the questionnaire. There were 2 firms of the respondents which made an investment decision for EIS and were expected to use the system soon. The remaining of 21 respondents indicated their needs to receive the results of this study so that they were believed either to have much interest in EIS or plan to develop EIS in the near future. One interesting point was that 5 of these 21 companies experienced failures in the development of EIS in the past. Of the respondents, about a third were IS managers (37%), followed by IS staff members (22%), functional area staff members (11%), and executives (11%). In the next section, we will analyze the survey data based on the 27 complete questionnaires and compare them with other EIS surveys (Watson et al., 1992).

RESULTS

General Information on Organizations

EIS appeared to be quite a newcomer to Korean firms and mostly used by big manufacturers. Seventy-eight percent of the respondents have used EIS for less than two years and the average age of EIS was found to be about 11 months (10.7). Fifty-nine percent of the firms which responded to the survey were from the manufacturing sector. The rest of the sample consisted of financial (26%) and construction (7%) firms which were followed by hospitals (4%) and retailers (4%). In addition, EIS appeared to be adopted by large firms - 61% of the firms with more than 500 billion Korean Won[1] annual sales (equivalent to US $625 millions). This may be due to the fact that bigger firms tend to be more complicated in their management and thus require EIS in its nature more than do medium and smaller ones (Rockart and De Long, 1988). In the case of the United States and the United Kingdom, EIS appeared to be adopted in larger companies initially and later increasingly used by medium and small companies (Bird, 1991; Fitzgerald, 1992). This may be ascribed to the facts that (1) medium and small companies also realized that the benefits of EIS were enormous and (2) initial costs to develop an EIS tended to decrease so that the costs did not become an obstacle in introducing EIS to companies any more. In the case of Korea, we found no relationship between the use of EIS and the size of the company in terms of the years of the EIS use.

[1] A U. S. dollar is equivalent to about 840 Won as of January 1997.

Development Initiation and Support

An interesting finding is that Information Systems Department (ISD) usually initiated EIS to the company rather than executives who were the end users of EIS. As seen in Table 3, ISD initiation accounted for 60% where executives were initiators of EIS development in 22% of the responding firms. The rest of initiators went to either planning departments (7%) or consulting firms (7%). This is quite inconsistent with Watson et al. (1992) which caught our attention (see Table 1). A possible explanation is that most executives of Korean firms like other developing countries are still struggling with operational issues other than addressing strategic issues in the use of information systems (Palvia & Palvia, 1992).

Table 1. Initiators of the EIS

Initiators	Korea	Watson et al. (1992)
Executives	22% (6)	86%
Information Systems Departments	60% (16)	14%
Planning Departments	7% (2)	
Consulting Firms	7% (2)	
Do Not Know	4% (1)	
TOTAL	100% (27)	100%

Executive sponsors are vital over the whole process of EIS development. They are required to specify their requirements for the system and provide the direction of proposed application and feedback, and exchange opinions with their staff members and line managers who supply related data about EIS constantly (Rockart & De Long, 1988). This role is commonly taken by executive sponsors and 96% of the firms appeared to have executive sponsors in the United States (Watson et al., 1992) (see Table 2). On the other hand, Table 2 shows that only 44% of the respondents said that they had executive sponsors in Korea. As reported earlier, ISD was a main initiator in Korea (not executives) and thus, it would be harder for the executives to understand the importance of EIS. Our study found that executive sponsors were mainly vice presidents, managing directors, and directors. However, in the United States, executive sponsors were of the top level of the organization, such as president or vice president (see Table 3).

Table 2. Existence of Executive Sponsorship

Sponsors	Korea	Watson et al. (1992)
Executive sponsor	44% (12)	96%
Non-Executive sponsor	56% (15)	4%
TOTAL	100% (27)	100%

Table 3. Positions Held by Executive Sponsors

Positions	Korea	United States
Presidents	8% (1)	39%
Vice Presidents	25% (3)	36%
Managing Directors	25% (3)	25%
Executive Directors	8% (1)	
Directors	33% (4)	
TOTAL	100% (12)	100%

Development Approach

Development Process: EIS may provide an effective tool box to drive the firm through the high velocity of economic environment. In a question to rank the important external factors to take into account in management, the respondents counted (1) rapidly changing external environment, (2) increasingly competitive environment, and (3) need to be more proactive in dealing with external environment (Table 4). The respondents were also asked to indicate internal pressures. Most frequently suggested factors included (1) need for more timely information, (2) need to be able to identify historical trends, and (3) need for increased efficiency (Table 5).

Table 4. External Pressures

(Total number of respondents = 27, multiple answers)

External Pressures	Total Points
Rapidly changing external environment	27
Increasingly competitive environment	26
Need to be more proactive in dealing with external environments	19
Need to access external databases	8
Increasing governmental regulations	1

Table 5. Internal Pressures

(Total number of respondents = 27, multiple answers)

Internal Pressures	Total Points
Need for more timely information	22
Need to be able to identify historical trends	18
Need for increased efficiency	17
Need for increased effectiveness	9
Need for rapid status updates on different business units	7
Need for access to operational data	4
Need for access to the corporate databases	3
Need for improved communications	1

Prior EIS research indicates that executives tend to be the main beneficiaries of EIS at the early introduction stage and then, the systems are adopted and used by supporting staffs and other functional department heads (Watson et al., 1992). Possibly, Korean executives may not want to take a drastic action to use EIS widespread all accross the firm until the systems turn out to be beneficial at their tasks of management. The results of our study also show that there was little difference between the numbers of users at an initial stage and a year later. However, interestingly enough, the number of screens in EIS was reported to double (Table 6). Taken together, a heavy focus in EIS of Korea appeared to be placed on enhancing the functionalities of EIS support (e.g., the number of screens) before EIS were to be used by more managers at the management task.

Table 6. Change in the Numbers of Users & Screens
(the firms of more than 1 year of EIS use)

Period	Number of Users	Number of Screens
Initially	16	73
6 months after initial introduction	17	91
1 year after initial introduction	18	144

Development Teams: The development teams of EIS appeared to have about four members which usually consisted of executive staff, system analysts, and programmers. Respondents were asked to rank five skills in order of importance required for EIS development. As shown in Table 7, three of the important skills included (1) knowledge of the business of the firm, (2) ability to organize data from internal and external sources and (3) ability to work well with executives of the firm. This indicates that EIS developers need to have good understanding of the task and business of a firm and good skills of communication to elicit the way of decision making and management of executives.

Table 7. Skills for EIS Development Team Members in Average Score

Skills	Total Points
Knowledge on company's business	96
Organizing ability of internal and external data	81
Ability to work with executives	76
Computer knowledge	75
Communications skills	75
Others	1

Information Sources: Table 8 indicates that the successful operation of EIS need data from a variety of sources. Among others, corporate databases were perceived as the most common source of internal data (93%). Data were reportedly acquired through functional areas (44%), documents (41%), and human (22%). Although the reliance on data from functional areas or documents was less than Watson et al. (18), this finding was generally consistent with Watson et al. (1992) (Table 8). External data were not regarded as critical as internal ones. Of 27 respondents, only 16 companies responded to the question regarding the sources of external data. The respondents appeared to acquire commonly through Korean Value Added Networks such as Chollian (38%), Hitel (31%), Joins (19%), KIS Line (6%), and Dial-VAN (6%).[2]

Table 8. Internal Data Sources
(multiple answers)

Internal Data Sources	Korea	United States
Corporate database	25 (93%)	92%
Functional areas	13 (44%)	69%
Documents	11 (41%)	72%
Human internal sources	6 (22%)	41%

Hardware Configuration: EIS need much information, which highlights the need of accessbility to DB, LAN, and print servers. Table 9 shows that EIS in Korean firms appeared to be operated in a hook-up connection with either servers (52%) or mainframes (30%). This is somewhat inconsistent with the results obtained from the United States. As seen in table 9, 49% of the U. S. firms were found to run EIS on mainframes. Such an inconsistent finding was due to the different point of time - that is, the U. S. survey was conducted in 1991, 4 years earlier than this study. The widespread use of EIS running on PC hooked up to either servers or mainframes was due to the fact that downsizing was practiced at many firms with the advent of highly cost-efficient network servers. It is now economically feasible to develop EIS running on PC network environment.

[2] CHOLLIAN, HITEL, JOINS, KIS LINE, and DIAL-VAN are VANs that are currently offered on-line in Korea. Examples of such systems include CompuServe, American On-line, and Prodigy in the United States.

Table 9. Comparison of Hardware Configuration for EIS

Hardware	Korea	United States
PC network with server	52% (14)	31%
PC network connected to mainframe	30% (8)	12%
Mainframe	18% (5)	49%
Standalone PCs	0% (0)	8%
TOTAL	100% (27)	100%

Software Package: EIS may be constructed in a number of ways: (1) in-house development, (2) the off-the-shelf commercial software, or (3) mixed of these. The availability of various and full-featured commercial EIS software contributed considerably to the growth of Korean EIS. The results presented in Table 10 indicate that many companies in Korea preferred to use the commercial software to develop their EISs. This finding is consistent with that of the United States. Indeed, commercial software certainly facilitates RAD (Rapid Application Development) which is highly recommended in EIS development and maintenance. Examples of commercial software heavily adopted in Korea include Commander EIS (Comshare) and Lightship (Pilot). It should, however, be noted that despite of the emergence of commercial EIS software, in-house development methods were also used in many companies as the commercial software often needs customization and its effectiveness often does not justify the costs.

Table 10. Comparison of EIS Development Software

Software	Korea	United States
EIS commercial software	41% (11)	53%
In-house development tool	33% (9)	22%
Mixed both	26% (7)	26%
TOTAL	100% (27)	100%

Development Methodology: Table 11 shows that prototyping was found to be the major methodology of EIS development in 67% of the companies who responded to our survey. This was somewhat lower than the level of adoption of prototyping methodology in the United States (90%). Prototyping is often recommended since executive requirements for EIS vary day by day and thus, the traditional system development methodology (i.e., life cycle model) is not appropriate. This might have contributed to the time taken longer than that of the United States (see Table 12). Fifty-nine percent of the companies developed their initial models within six months. Time taken for the U. S. firms was in a category of one to six months to develop the initial version of their EIS and the average development time was 3.4 months.

Table 11. Comparison of EIS Development Methodology

Development Methodology	Korea	United States
Prototyping	67% (18)	90%
Traditional System Development	33% (9)	10%
TOTAL	100% (27)	100%

Table 12. Time Taken for Development of Initial Models

Time	Korea	United States
Less than 6 months	50% (16)	
6 months to 1 year	26% (7)	
Longer than 1 year	15% (4)	3.4 months
TOTAL	100% (27)	(Average Time)

System

System Capabilities: Regarding EIS capabilities, 81% of the respondents indicated that EISs were useful in accessing to current status information. What followed was EISs capability to access external news and external databases (70%) and drill down to more detailed information (67%). Forty percent of the respondents indicated capabilities such as electronic mail, word processing, trend analysis, exception reporting, and/or DSS functions as part of EISs (Table 13). As the usefulness of the integration of both EIS and DSS increases, most of commercial EIS software tend to incorporate DSS capabilities into EIS (Watson et al., 1992). Of the respondents, only three companies indicated that full-motion video technology was part of their EISs. To summarize, the features provided by EIS in Korea were found to be much lower than 1991 U. S. survey results. In particular, exception reporting was found to be 95% in the U. S. case. This was somewhat surprising in that the exception reporting is one of the important EIS functions (Friend, 1986; Moynihan, 1993; Schaeffer and Turban, 1987). This suggests that many more features are to be added in EIS for their full-capabilities as claimed in literature.

Table 13. Capabilities of EIS

Capabilities	Korea	United States
Access to current status information	22 (81%)	98%
External news access	19 (70%)	over two-thirds
Other external database access	19 (70%)	over two-thirds
Drill down	18 (67%)	over two-thirds
Electronic mail	15 (56%)	over two-thirds
Word processing	14 (52%)	over two-thirds
Trend analysis	13 (48%)	over two-thirds
Exception reporting	12 (44%)	96%
DSS	11 (41%)	over two-thirds
Full motion video	3 (11%)	Image (6%)

Information Content: EIS need to provide information from many sources to support executives' tasks effectively (Watson et al., 1992). The information may be concerned with the industry that they belong to, the strategic business units and various business fields such as subsidiaries, divisions, and functional departments. Table 14 depicts that the percentages in the United States were generally higher than those in Korea. This indicates that EIS in the United States provided more organizational information from various sources than in Korea. This may be due to U. S. companies started to computerize their organizations earlier than Korean companies, so that ISD in the U. S. companies could gather more information than those in Korea.

Table 14. Comparison of Information Contents Provided by EIS between Korea and U. S.

Information Contents	Korea	United States
By functional areas	77%	96%
By product	62%	98%
By key performance indicators	62%	88%
By strategic business units	50%	90%
By projects	31%	84%
By regions	27%	47%

System Use: We found that executives hardly used their EISs while they were on business trips or at home. It contradicted with the executives of the United States (Watson et al., 1992) (Table 15). On the other hand, Korean executives were found to use their EISs on a regular basis at the work of their companies more than 50% and 83% of them said that they used the EIS by themselves without any help from others. The 89% of respondents in the United States reported that their executives used the EIS directly (Watson et al., 1991).

Table 15. Comparison of Use of EIS Outside of Oganization between Korea and U. S.

Outside Use	Korea	United States
Use of EIS at home	4%	31%
Carrying PCs (EIS) while in business trip	0%	22%
Approach to EIS via modem while in business trip	4%	8%

Response Time and User Interface: Response time and user interface are very crucial in successful implementation and adoption of EIS. Most of the respondents indicated the response time less than 5 seconds (92%). The response time between 1 second and 3 seconds accounted for 48% of the respondents. In the United States survey, the mean response time of the EISs was 5.3 seconds, with 41% of the firms reporting response times over 5 seconds. The user interfaces often adopted in Korean firms included keyboard interface (93%), mouse (89%), touch screen (33%), and remote control (4%) (Table 16). As seen in Table 16, there seemed to be more variety of user interfaces in the U. S. than Korea. With the increasing development of computer technology, more and easier user interfaces would be added in EIS at Korean firms.

Table 16. Comparison of User Interface

User Interface	Korea	United States
Keyboard	25 (93%)	94%
Mouse	24 (89%)	73%
Touch screen	9 (33%)	33%
Remote control	1 (4%)	8%
Track ball		31%
Electronic stylus		4%

Satisfaction

EIS users were asked to indicate their satisfaction about the system on a five-point Likert scale (Strongly disagree - 1; Strongly agree - 5) and Table 17 presents the means. Although the level of satisfaction with EIS seemed to be generally high, there were three items below the mid point (3 being on average). That is, EIS users appeared to be dissatisfied with the systems and doubt the usefulness of and access to external data. This dissatisfaction may be found among users at firms with heterogeneous platforms where data are stored on varied machines, database management systems, or even in different format. The lowest score was indicated about the positions of EIS development team members in organizations (2.40). Also, relatively lower scores were centered around some organizational issues such as the positions of executive sponsors (3.08), the positions of operating sponsors (3.20), and the positions of EIS support team members (3.04). On the other hand, these organizational issues were relatively higher in Watson et al. (1992) (executive sponsors - 4.4; operating sponsors - 4.2; support team members - 4.2; and development team members - 3.6). Even though Korean practitioners perceived the need for higher ranks of executive sponsors and operating sponsors in their organizations, the rationale was that most executives in Korea thought that technical matters belonged to IS professionals, not executives.

A relatively low score (3.12) was given to the need of training to get used to EIS. This is quite interesting in consideration of EIS practitioners that only minimal training for the system

use was required. This result was similar to that of U. S. (2.8). Another interesting point was that the respondents gave a relatively high score (3.96) to satisfactory response time compared to the U. S. case (1.9). This was because Korean EIS were not sophisticated enough to deteriorate the system response time. U. S. surveys apparently showed that the response time in 1988 U. S. survey (2.8 seconds) was much faster than that in the 1991 U. S. survey (5.3 seconds) because most EISs in the United States became more complex in 3 years.

Table 17. Comparison of Satisfaction with the System

Satisfaction	Korea	U.S.
Our EIS is easy to use.	4.20	4.4
Our EIS provides accurate information.	4.12	4.0
Our EIS provides satisfactory response time.	3.96	1.9
Our EIS has a satisfactory user interface(s).	3.92	3.8
The internal data provided by our EIS are satisfactory.	3.84	3.0
I think our EIS is effective.	3.80	4.2
The information presentation methods of our EIS are satisfactory.	3.68	4.6
The development methodology we used for our EIS was effective.	3.65	3.8
The capabilities provided by our EIS are satisfactory.	3.56	3.6
The software we employed to develop our EIS meets our needs.	3.52	2.8
Our EIS development team members had the skills needed to develop our EIS most effectively.	3.48	3.4
Our EIS provides timely information	3.44	4.4
Our EIS support staff satisfactorily supports our EIS.	3.30	3.0
Our EIS support team members have the skills needed to most effectively support our EIS.	3.22	4.6
Our operating sponsor was in an appropriate organizational position to oversee the day-to-day details of developing our EIS.	3.20	4.2
Our EIS needs minimal training to use.	3.12	2.8
Our executive sponsor was in an appropriate organizational position to support the development of our EIS.	3.08	4.4
Our EIS support team members hold appropriate organizational positions to most effectively support our EIS.	3.04	4.2
Our EIS provides satisfactory access to external data.	3.00	2.4
The external data provided by our EIS are satisfactory.	2.68	2.8
Our EIS development team members held appropriate organizational positions to most effectively develop our EIS.	2.40	3.6

(Based on a 5-point Likert Scale: 1 = strongly disagree; 5 = strongly agree)

CONCLUSIONS

Executives require much information to steer the management and operation of firms through the high-velocity of economic environments. EIS have been quickly adopted at the practice due to their capability of letting the executives access the right information they need. Indeed, users of EIS are equipped with valuable features to navigate corporate databases across all functions of marketing, sales, customer support, finance, and accounting. This study aims to explore how EIS are adopted and used at Korean companies. Another focus of this study is concerned with whether the use of EIS at Korean firms is compared to that of the United States. To enable such a cross-comparison, this study was conducted based upon the survey instrument of Watson et al. (1992). This study was designed to tap mainly into such issues around EIS as development initiation and support, development methodology, capabilities of EIS, and satisfactions with the system. We found that there exists much difference in the pattern and behavior of EIS use between Korea and the United States. This distinction may be ascribed to a number of reasons. First, EIS were adopted at Korean firms later than in the United States. Second, Korean executives place more focus on their managerial skills of human relations, negotiations, and communications than such activities as analysis and forecasting for which EIS may turn out to be more useful and effective. In addition, the difference in the usage of EIS between two countries may be ascribed to any deviation in national and corporate cultures of the two countries.

We hope that this study is valuable to Korean organizations in their planning of EIS development and their further expansion and upgrade of their current EIS. This study is also expected to help the international EIS vendors to cope with some issues in EIS development and enter the relatively new markets like Korea. However, caution should be taken to take advantage of the results of this study. The sample of this paper appeared to be relatively small. This was due to the fact that EIS were at the initial stage of adoption in Korea and the number of Korean firms using the system is quite limited. Also, a cross-comparison in this paper were made with Watson et al. (1991) which was conducted three years earlier than our study. We believe that there should be some difference in the level of system development and adoption between the United States and Korea. EIS at Korean firms may stay at the level where they used to be three years ago in the United States. This suggests that comparisons can be reasonably made despite such difference in the time of writing. In particular, users indicated different levels of their satisfaction in the use of EIS due to cultural and behavioral differences between two countries. Further research is encouraged with a finer methodology.

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