기업 지식 관리에 있어 조직통제의 역할에 관한 연구
- 한국 건설기업 중심으로 -

문재영*, 이원희**

요약

오늘날 기업 환경은 기업의 경쟁력을 좌우하는 지식을 기반으로 한 정보사회이다. 특히 지식경영시대에서는 지식을 최적으로 조직화 할 수 있는 기업만이 지속적인 경쟁우위를 확보할 수 있다. 최근 국내 건설업체의 경우 국내, 외의 많은 불안정적인 요인들로 인해 어려움을 겪고 있다. 이러한 환경속에서 국내 건설업체들이 경쟁력을 가지기 위한 방법의 하나로 기업조직이 보유한 조직지식의 속성이 조직 내 통제과정에 따라 지식이전과 지식활용에 어떠한 영향을 주는지를 알아보고자 하는데 그 목적이 있다. 이를 위해 본 연구에서는 구조방정식 모형을 이용하여 국내 건설업체들이 조직지식 속성의 내부 요인들과 통제방식이 지식의 이전 및 활용에 어떠한 영향을 주는지를 실증분석 하였다. 본 연구의 결과 국내 건설업체들의 경우 결과통제는 지식이전 및 활용에 유의한 영향을 미치며, 프로세스통제는 지식활용에 유의한 영향을 미치는 것으로 확인하였다.

A Study on the Role of Organizational Control for the Knowledge Management of a Corporation - Focus on the Korean Construction Firms -

Jae-Young Moon*, Won-Hee Lee**

ABSTRACT

Today's corporate environment is an information age in which knowledge decides corporate competitiveness. Especially in an age of knowledge management, corporations that can make optimal organization of knowledge can obtain a competitive advantage. Recently, domestic construction companies have been going through a difficult period of time due to many adverse domestic and foreign factors. This study looks into the effect the attributes of corporate knowledge have on the transfer and application of knowledge along the control line in an organization. To this end, we did an empirical analysis of what effect the internal factors and control method of organizational knowledge attributes have on the knowledge transfer and application with the application of the structural equation modeling (SEM) for domestic construction companies. According to the result of this study, the control of the results has a significant effect on both the knowledge transfer and application, while the control of the process has a significant effect on the knowledge application for Korean construction companies.

Key Words : Attributes Organizational Knowledge, Outcome Controls, Process Controls, Knowledge Transfer, Knowledge Application, Structural Equation Model.

* Dongseo University, Division of Business
** Kyungnam College University of Information & Technology(✉onlyonehee1@hanmail.net)
· First Author : Jae-Young Moon · Correspondent Author : Won-Hee Lee
· 접수일(2013년 9월 27일), 수정일(1차 : 2013년 10월 7일), 게재확정일(2013년 10월 10일)

www.kci.go.kr

Ⅰ. Introduction

Global In today's business environment, corporations are facing a global competitiveness challenge due to a dramatic change in technology, a shortened product life cycle, the downsizing of organizations, and high market volatility. A corporation must be able to manage a variety of wide spread knowledge[1]. Knowledge is well recognized as one of the most competitive assets in a dynamic business environment. In recent years, corporations, in fact, have been seriously focusing on the organization, creation, transfer, search and sharing under the shadow of Knowledge Management.

Existing studies regarding the knowledge management process in Knowledge Management, however, focus only on the attainment and transfer of knowledge, while ignoring the attributes of knowledge itself and the process through which knowledge is managed and applied within the organization. Existing studies on knowledge rarely went beyond the provision of the concepts and research models. And domestic corporations have not been able to fully verify the specific effect of the introduction of Knowledge Management. In light of such limitations, an overall analysis is necessary concerning the relationship among the attributes of organizational knowledge itself and the role of its control method and knowledge transfer and the application for the knowledge management of a corporation. Therefore, what needs to be considered is the procedural aspect of the control process through which the attributes of organizational knowledge affect knowledge transfer and the application of the knowledge management process.

This study presents a model that shows the role of control in organizational knowledge management at a time of increasing impotence of competitiveness, the knowledge management process and Knowledge Management. The purpose of this study, therefore, is to analyze what effect the attributes of organizational knowledge have on the transfer and application of knowledge depending on each control method (the result, the process)

Ⅱ. Theoretical Background

2.1 Attributes of Organizational Knowledge

To evaluate how organizational knowledge is managed in a corporation, we must understand first the way knowledge itself can change. Various studies of the past typified the attributes of various types of knowledge and the three types of the attributes can be identified to see important qualitative differences of knowledge. We call the types "codifiability", "completeness" and "diversity". And these knowledge attributes will be discussed in relation to two kinds of organizational knowledge. These are the result of (1) the way to achieve an organizational objective, the behavior and the process (2) the result of these processes, and the objective itself [2][3].

The obvious characteristic of codifiable knowledge is the fact that it can be broken down into specific components that are easy to understand and express [4]. Highly codifiable knowledge is known to be explicit knowledge because it tends to not be ambiguous, nor have room for dispute, but is observable. Such characteristics make it easier to

www.kci.go.kr

transfer highly codifiable knowledge between individuals or in an organization without loss of its meaning[5]. On the contrary, tacit knowledge cannot be codified or broken down into components. Tacit knowledge, therefore, is difficult to be made clear or expressed. The application capability of tacit knowledge, therefore, depends on an individual's prior experience and relation to the knowledge. Such experience provides a foundation for easier understanding of the new knowledge.

When process-related knowledge is easily codifiable, it is possible to simplify the process into a series of specific, identifiable rules or behavior processes [4][5]. The employees can have clear and obvious instruction about the very process they participate in. When result-related knowledge is obvious, the final result desired by the organization can be correctly specified. And it is possible to provide individuals with obvious, undisputable standards.

The concept of completeness indicates the level of applicability and suitability for decision makers to use for decision making or their tasks. The more volatile or unpredictable, the more incomplete the knowledge will be [6]. The last attribute of knowledge is diversity, which indicates the amount and relevance of the information necessary for the explanation of the characteristic of knowledge of the issue in dispute[7]. Very diverse knowledge has multiple and diverse variables[4][8]. When process-related knowledge is not diverse, it suggests that the knowledge is specialized to a given task. And this is mostly related to a special functional capability. When result-related knowledge is not diverse, it suggests that the number of knowledge components that are related to the objective is the smaller or characteristically the more specialized.

2.2 Outcome Control

In Outcome control is a mechanism that focuses on a certain task or outcome an organization desires. An outstanding characteristic of outcome control is that it describes a specified outcome requirement for employees' tasks[2].

Outcome control depends on using an inducement that is clearly adjusted to the level of wanted outcome or effort. Such inducements are generally a form of definitive compensation for each sale, the number of products produced and the level of profit generated. Mechanism of such category includes performance-related contract, bonus, profit distribution plan, pay per piece, commission and proposed program that awards compensation based on cost saving. Outcome control is ex-post control with responsive characteristics, but there is not any prevention system that can prevent errors from occurring before an error actually occurs because the control can take place only after the occurrence of an error. That is, even though it is not specified as an object for the employees to achieve, it often causes shortsighted behavior because it focuses on only quantifiable objectives, excluding other objectives that are also important in the performance of an organization[9].

Because outcome control specifies outcome requirements, but does not specify behaviors that yield wanted outcome or procedures types, such a control is most suitable for cases where it is difficult to define or program the process-related knowledge

www.kci.go.kr

[2]. In the end, such control can be said to be most suitable for tacit, incomplete and diverse process-related knowledge and for explicit, complete and unvaried outcome-related knowledge.

2.3 Process Control

Process control is about structuring the activities of employees or the transformation process of works and regulating employees' behaviors reflected in their function [10], and it is defined as a mechanism that clearly specifies proper behaviors and processes in which employees must participate. The benefit of using such control is that the control is direct. That is, it enables a process control manager to use feedback as a tool to correct any departing activity as soon as it occurs. But the process control has a weakness as a limitation on the manager's control range or an increase in actual cost due to individual supervision [2][10]. And under such control, an individual is responsible only for the process that is clearly described rather than the outcome of the process[11].

The process control is most useful when the organization clearly specifies the job domain of individual workers, and is organized with specialized works. The process control includes highly formalized standard processes and rules, clearly established practices, specialized work statements, hierarchical senior-junior relationships, and highly-structured groups and environment[12].

The process control means that the organization understands the proper behaviors and the order of events very well during their job execution[10]. Organizations will use the process control only when a specific procedure that individuals have to follow is not characteristically complicated. This is because as the behaviors or activities to be programmed get more and more complicated, the probability of error will increase when necessary works or tasks are instructed to achieve a desired outcome. Therefore, the overall process control-related process-related knowledge tends to be obvious, complete and non-diverse.

2.4 Knowledge Transfer

Knowledge transfer in an organization can be defined as a process in which a unit (team, department and part) is influenced by the experiences of another unit[13]. This definition is similar to the previous concept in terms of individual analysis in cognitive psychology. In the previous study, it was pointed out that outcome control depends heavily on the process of attaining an individual's internalized new knowledge. Because knowledge is internalized in an individual, it is particular and difficult to transfer to another person[14]. And the transferability is lower because of the variability of the process use to the incompleteness and inherent complexity of knowledge. Therefore, experiential process-related knowledge will be difficult to be systematically transferred to other persons regarding the outcome control. On the contrary, outcome-related knowledge that is explicit, complete and non-diverse can be easily transferred to other parts of an organization by relying on the outcome control[15].

The attributes of process control-related knowledge are not useful for the attainment of an important new knowledge, but they work much

www.kci.go.kr

better when process-related knowledge is transferred to an entire organization. Standard operation procedure, job description and rules are highly codified, so that it is easier to transfer to an overall organization. Consistency and lack of diversity in a process is an indication that the knowledge can be easily transferred to individuals and departments. But the characteristic of specialization of process-related knowledge limits the necessity to transfer to other individuals or other departments of an organization. Outcome-related knowledge is also individual specific, so that there is no need for transfer.

2.5 Knowledge Application

The ultimate purpose of the attainment, transfer and interpretation of knowledge is to apply the knowledge toward the objective of the organization. The skill of using knowledge develops through a special method by which such ex-ante processes are managed. This is because collective understanding that is generated through such early processes results in a unique way of thinking and behavior. Therefore, a decision making method is formed in the final analysis[16]. Organizations thus will be able to use resources for a special purpose throughout entire process. Therefore, the capacity to use knowledge in an outstanding way is the key point of corporate capability development.

As already explained, corporate capability to engage in knowledge management is not automatic. Corporate knowledge flow is very much influenced by the type of organization and the way knowledge is organized such as individual cooperation and information sharing. The attributes of knowledge have already been discussed and each attribute has an important implication for the way knowledge is managed. A process or instruction that is used for codifiable knowledge is vastly different from that of tacit knowledge. Likewise, incomplete knowledge needs different management from that of complete knowledge, and it is the same for knowledge diversity. There are few studies about such an issue so corporations have little understanding on the management method for certain types of specific knowledge. This study, therefore, will address this issue by proving that the control system of companies has a big impact on the corporate capability of knowledge management.

III. Research Model and Research Hypotheses

Using the Structural Equation Model, the empirical investigation aims to understand how the attributes Organizational Knowledge effects on the Outcome Controls, Process Controls, Knowledge Transfer, Knowledge Application. Figure 1 shows the study model.

As pointed out by [10] on the relationship between organizational knowledge and outcome control, the outcome control performance standard concisely explains “crystallized” performance standards that transfer clear and specific knowledge for an outcome organizationally desired. Outcome control is most suitable for tacit, incomplete, diverse process-related knowledge, and explicit, complete, non-diverse outcome-related knowledge.

www.kci.go.kr

[17] proved a relationship between outcome control and the corporate knowledge characteristic, taking a pharmaceutical company's R&D project and jewelry manufacturer for examples. Using process control means having a very high level of understanding by an organization of proper behavior and the order of events during the process of conducting business[10]. Regarding the previous study by [17] in which two environment cases, pharmaceutical R&D project and jewelry manufacturer, were reviewed to find a relationship between outcome control and organizational knowledge, using process control implies knowledge about the process in which employees need to be involved as we look into how the knowledge characteristic changes in such environment as a process control.

At this point, this study sets the following hypotheses with regard to the characteristic of organizational knowledge, outcome control and process-control.

H1: The attributes Organizational Knowledge has a positive effect on Outcome Controls.

H2: The attributes Organizational Knowledge has a positive effect on Process Controls.

It is pointed out that outcome control relies very heavily on the procedures of attaining individually internalized new knowledge. Because knowledge is developed in an individual, it is particular and difficult to transfer to others[14]. And its transferability is lower because of the variability of the process due to the incompleteness and internal complexity of knowledge. Therefore, experiential process-related knowledge following the outcome control will be difficult to systematically transfer to other persons. On the contrary, explicit, complete, non-diverse outcome-related knowledge would be easily transferred to other parts of an organization by relying on the outcome control[15]. The objective outcome of outcome control is obvious and completely materialized so that decision makers can make various attempts in various ways to achieve an acceptable outcome[18]. So it is freely and actively recommended to search for new knowledge and ideas based on his/her own unique experience and perspective rather than being limited to existing organizational knowledge.

The attributes of process control-related knowledge are not useful in attaining new knowledge, but they are much more useful in transferring process-related knowledge to an entire organization. Standard operation procedures, business explanations and rules are highly codified so that it is easier to transfer to an entire organization. Consistency of a process and a lack of diversity mean that the knowledge can be easily distributed to individuals and departments of an organization.

We can tell that process control relies much on available work-specific information within an organization, and there is little need to attain new knowledge or exchange knowledge beyond clearly defined works.

Therefore, this control is advantageous to the generation of a high level of concentration on personal work that excludes most other knowledge and the generation of a high level of accuracy. Therefore in this study, the relationship among outcome control and process control and the application is hypothesized as follows:

www.kci.go.kr

H3: The Outcome Controls has a positive effect on Knowledge Transfer.

H4: The Outcome Controls has a positive effect on Knowledge Application.

H5: The Process Controls has a positive effect on Knowledge Transfer.

H6: The Process Controls has a positive effect on Knowledge Application.

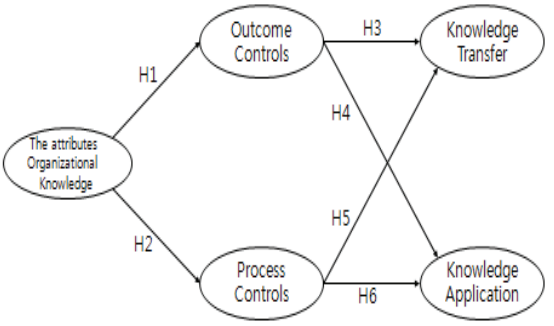

Figure 1. Research Model
그림 1. 연구모형

IV. Methodology

4.1 Sampling

The samples for this study were collected from active member companies of the Construction Association of Korea and the distributed questionnaires were collected by post, e-mail, telephone, fax or in person.

The total response was 274. 243 of them were used for this study. 31 of them were excluded because of ineligible responses.

4.2 Characteristics of the Sample

The results of the frequency analysis for the demographic characteristics of this study are as follows: First, the number of male responses was 225 (92.6%), which was 207 more than the number of female responses 18 (7.4%). Regarding the age, the largest bracket was in their 30s, 110 (45.3%); in their 40s, 81 (33.3%); in their 20s, 34 (14.0%); and in their 50s or beyond, 18 (7.4%). As for their marital status, 167 (68.7%) of them were married, while the singles were 76 (31.3%). With regard to their educational backgrounds, high school graduates were 23 (9.5%); 2-year college graduates were 51 (21.0%); 4-year college graduates were 156 (64.2%); and graduate school graduates or more were 13 (5.3%). So, a total of 64% of them received 4-year college degrees or more.

Looking at their title, the highest number were assistant manager/manager, 104 (42.8%); assistant manager/chief 53 (21.8%); deputy general manager/general manager 45 (18.5%); and director (board member) 41 (16.9%), so their overall distribution was about even.

For the number of years they had been working for their company, 6~7 years was 99 (20.6%); 2~3 years 70 (28.8%); 4~5 years was 55 (20.5%); and 1 or less was 24 (9.9%). Lastly, their departments are as follows: 125 (51.4%) for technology (civil engineering/construction/plant); 85 (35.0%) for on-site; 17 (7%) for management (planning, personnel, general affairs, accounting, and capital); 9 (3.7%) for sales; 5 (2.1%) for other; and 2 (0.8%) for overseas department (headquarters).

www.kci.go.kr

4.3 Investigation Process

SPSS Windows 12.0 and AMOS 18.0 were used for the analysis of the data collection. The confidence level of the investigation tools was analyzed with the SPSS Windows 12.0 first. Then the Confirmatory Factor Analysis was carried out with the AMOS 18.0 to verify the validity of the measuring tools. Lastly, the Structural Equation Model Analysis was carried out with the AMOS 18.0 to analyze the causal relationship among The attributes Organizational Knowledge, Outcome Controls, Process Controls, Knowledge Transfer, Knowledge Application.

Ⅴ. Results

5.1 Development of the Measuring Items

This study looks into what impact the attributes of an organizational knowledge has on the outcome control and process control that controls knowledge and then what impact this outcome control and process control have on the transfer and application of knowledge. Regarding the development of the items for measurement, the questions of the questionnaire were derived from existing studies[2][10][13][18]. Second, related specialists reviewed whether they were properly expressed linguistically or whether there were any redundancy factors before selecting 15 questions for the attributes of organizational knowledge, 13 questions for outcome control, 13 questions for the process control, 15 questions for knowledge transfer, and 15 questions for knowledge application, for a total of 71 questions.

5.2 The Findings of the Exploratory Factor Analysis

The exploratory factor and the confidence level were analyzed with the SPSS Windows 18.0, while Cronbach's $\alpha > 0.7$ was used for the assessment of the confidence level.

The Principle Component Analysis was used for the factor extraction, while Varimax Rotation was used for the rotation method and the items were made suitable for the purpose of the investigation. The exploratory factor analysis was conducted with Factor Loadings: FL>0.6 which indicates the correlation between the assessment factors.

First, using the SPSS 18.0, seven items were deduced by the Exploratory Factor Analysis, and the factor loading of each item for all the The attributes Organizational Knowledge, Knowledge Transfer were more than 0.6. But when it comes to Outcome Controls, Process Controls, Knowledge Transfer, Knowledge Application, the measurement tool was below 0.6, so four items were removed.

The Cronbach's α (>0.7) of the confidence level appeared enough in between 0.892 and 0.977 that both the convergent validity and the discriminant validity were suitable <See Table 1>.

www.kci.go.kr

Table 1. The Findings of the Exploratory Factor Analysis
표 1. 탐색요인 분석결과

	The attributes Organizational Knowledge		Outcome Controls	Process Controls	Knowledge Transfer		Knowledge Application	
	Factor 1	Factor 2			Factor 1	Factor 2	Factor 1	Factor 2
No. of items	10	5	13	13	8	7	11	4
Final items	10	5	12	11	8	7	10	4
Cronbach'sα	0.912	0.958	0.915	0.977	0.966	0.903	0.892	0.978

5.3 The Findings of the Confirmatory Factor Analysis

Table 2. The Result of the Confimatory Factor Analysis
표 2. 확인적 요인분석결과

Construct	Number of Items		Cronbach's α	C.R.		AVE	
	Before	After					
The attributes Organizational Knowledge	15	12	0.921	Factor 1	0.898	Factor 1	0.501
				Factor 2	0.912	Factor 2	0.554
Outcome Controls	12	9	0.894	0.856		0.502	
Process Controls	11	8	0.966	0.847		0.506	
Knowledge Transfer	15	11	0.897	Factor 1	0.884	Factor 1	0.526
				Factor 2	0.866	Factor 2	0.511
Knowledge Application	14	10	0.950	Factor 1	0.924	Factor 1	0.634
				Factor 2	0.911	Factor 2	0.622
Total	67	50					

The measurement tools in the investigation was reflected in the previous researches. They got thorough advice and review from related specialists. Therefore, it can be said to have validated the contents.

Using the AMOS 18.0, the Confirmatory Factor Analysis (CFA) was carried out to test the validity of the test tools on the items that were first tested through the exploratory factor analysis and confidence analysis. First, the fitness of the concepts and measurement variables were tested with the Maximum Likelihood Method.

The methods used for the adequacy of the assessment items are Standardized Factor Loadings: FL>0.6), Squared Multiple Correlations: SMC>0.5), Standardized Residual Covariance; -2.58<SRC<+2.58) [19] and the Construct Reliability; C.R.>0.7 and Average Variance Extracted: AVE>0.5 [19][20]. The methods used for the confirmation on the significance level of the study model were Goodness-of-fit-index>= 0.9 (GFI), Adjusted Goodness-of-fit-index>=0.9 (AGFI), Root mean square residual<= 0.05 (RMR), Normed fit index>=0.9 (NFI), Comparative fit index>=0.9(CFI) and Root Mean square error of approximation<=0.1(RMSEA).

Lastly, the path coefficients between theoretical variables were identified using the Structured

www.kci.go.kr

Equation Model (SEM) to verify the hypotheses of the investigation.

According to the findings of the confirmatory factor analysis, all the Standardized Factor Loadings, Squared Multiple Correlations, Standardized Residual Covariance [19] satisfied the necessary criteria value. As a result, 17 items were removed from the 50 items for the final selection.

5.4 Analysis of the Structural Model

Normally, the causal relation is used to find the cause and effect relationship. In the study, therefore, using covariance structure modeling, the causal relationship between HIS, strategy, employee satisfaction, work process and the business results was analyzed.

The fit statistics of the initial model indicate that the chi-square of the model is 128.332 with a d.f. of 11. GFI is 0.911, AGFI is 0.875, NFI is 0.920, CFI is 0.928 and RMR is 0.044. All the fit statistics of the initial casual model were fit.

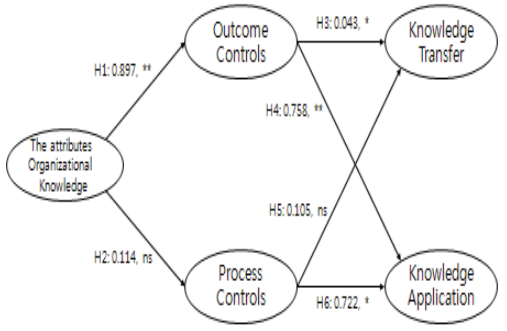

Figure 2. Results of Research Model
그림 2. 연구모형 결과

According to the findings of the investigation, The attributes Organizational Knowledge appeared to have an effect on the Outcome Controls (H1). The Outcome Controls appeared to have an effect on the Knowledge Transfer(H3) and Knowledge Application(H4), while the Process Controls appeared to have not an effect on the Knowledge Application(H6) but Knowledge Transfer (H5).

Table 3. The Result of the Research Model
표 3. 연구모형에 대한 실증분석

Hypothesis	Path	FL	T-value	P-value	Hypothesis Supported
H1	The attributes Organizational Knowledge → Outcome Controls	0.897	12.665	0.000	**
H2	The attributes Organizational Knowledge → Process Controls	0.114	0.644	0.105	ns
H3	Outcome Controls → Knowledge Transfer	0.672	10.245	0.043	*
H4	Outcome Controls → Knowledge Application	0.758	11.175	0.000	**
H5	Process Controls → Knowledge Transfer	0.105	0.014	0.177	ns
H6	Process Controls → Knowledge Application	0.722	9.256	0.024	*

*: P<0.05, **: P<0.01, ns: not significant

www.kci.go.kr

Ⅵ. Conclusion

This study looks into what effect the attributes of organizational knowledge has on the knowledge transfer and knowledge application. The samples were drawn from the members of Construction Association of Korea who were registered with the Association as currently active in their business domestic and/or overseas and 243 items of data were collected for pilot measurement.

As a result, the attributes were found to have a positive impact on the outcome control, but no impact on the process control. The outcome control was found to have a positive impact on both knowledge transfer and knowledge application. And the process control appeared to have a positive impact on the knowledge application, but with no impact on knowledge transfer. The reason seen from the perspective of the industrial characteristic of the construction company, work know-how of the employees is in the state of generalization, and the utilization of knowledge transfer from inside is low due to the authoritative industrial culture of the domestic construction companies.

Based on the results mentioned above, the following research implications can be presented. It can be seen that applying empirical analysis to the core process of enterprise knowledge management, knowledge sharing and utilization for domestic on-site construction companies, has both important academic significance and implications.

REFERENCES

[1] A. Aurilla, and B. Thommy, "Knowledge Sharing Practices : Analysis of a Global Scandinavian Consulting Company", *Electronic Journal of Knowledge Management,* Vol. 4, No. 2, pp. 109-116, 2006.

[2] K. M. Eisenhardt, "Control: Organizational and economic approaches", *Management Science,* Vol. 31, pp. 134-149, 1985.

[3] S. A. Snell, and M. A. Youndt, "Human resource management and firm performance: Testing a contingency model of executive controls", *Journal of Management,* Vol. 21, No. 4, pp. 711-737, 1995.

[4] B. Kogut, and U. Zander, "Knowledge of the Firm, Combinative Capabilities, and the Replication of Technology," *Organization Science,* Vol. 3, No. 3, pp. 383-397, 1992.

[5] R. M. Grant, "Prospering in dynamically - competitive environments: Organizational capability as knowledge integration , "*Organization Science,* Vol. 7, pp. 375-587, 1996.

[6] C. Gresov, "Effects of dependence & tasks on unit design & efficiency", *Organization Studies,* Vol. 11, pp. 503-529, 1990.

[7] D. C. Galunic, and S. Rodan, "Resource recombinations in the firm: Knowledge structures and the potential for Schumpeterian innovation", *Strategic Management Journal,* Vol. 19, pp. 1193-1201, 1998.

[8] G. Szulanski, "Exploring Internal Stickiness : Impediments to the Transfer of Best Practice within the Firm," *Strategic Management Journal,* Vol. 17, pp. 27-43, 1996.

[9] E. G. Flamholtz, "Organizational control systems as a managerial tool," *California Management Review,* Vol. 22, No. 2, pp. 50-59, 1979.

[10] S. A. Snell, "Control theory in strategic human resource management: The mediating effect of administrative information", *Academy of*

www.kci.go.kr

Management Journal, Vol. 35, pp, 292-327, 1992.

[11] S. A. Snell, and M. A. Youndt, "Human resource management and firm performance: Testing a contingency model of executive controls", *Journal of Management,* Vol. 21, No. 4, pp. 711-737, 1995.

[12] I. Nonaka, and H. Takeuchi, *"Knowledge and Management"* Chapter 2 of Ilujiro Nonaka and Hirotaka Takeuchi, The Knowledge Creating Company: How Japanese Companies Create the Dynamics of Innovation, New York: Oxford University Press, pp. 21-55, 1995.

[13] L. Argote, and P. Ingram, "Knowledge Transfer : A Base for Competitive Advantage in Firms", *Organizational Behavior and Human Decision Processes,* Vol. 82, No. 1, pp. 150-169, 2000.

[14] G. Szulanski, "The process of knowledge transfer: A diachronic analysis of stickiness." *Organizational Behavior and Human Decision Processes,* Vol. 82, No. 1, pp. 9-27, 2000.

[15] M. Polanyi, "The tacit dimension," Garden City, NY: Anchor Books, 1967.

[16] H. Tsoukas, and E. Vladimirou, "What is organizational knowledge?", *Journal of Management Studies,* Vol. 38, No. 7, pp. 973-993, 2001.

[17] K. L. Turner, and M. V. Makhija, "The Role of Organizational Controls in Managing Knowledge", *Academy of Management Review,* Vol. 31, No. 1, pp. 197-216, 2006.

[18] R. Simons, "How new top managers use control systems as levers of strategic renewal." *Strategic Management Journal,* Vol. 15, pp. 169-189, 1994.

[19] R. P. Bagozzi, and Y. Yi, "On the evaluation of structural equation models," *Journal of the Academy of Marketing Science,* Vol. 16, pp. 74-94, 1988.

[20] B. S. Kang, "The Research Methodology for Casual Analysis", Seoul: MuYugGyungYung, 2002.

저자소개

문재영(Jae-Young Moon)

경희대학교 일반대학원 경영학과
(경영학석사)
경희대학교 일반대학원 e-Business
(경영학박사)

2006년~현재 동서대학교 경영학부 교수
※ 관심분야 : 품질경영, CRM, 데이터베이스 시스템

이원희(Won-Hee Lee)

부경대학교 경영대학원 경영학과
(경영학석사)
부경대학교 대학원 국제통상물류학과
(경영학박사수료)

2006년~현재 경남정보대학 경영학부 겸임교수
※ 관심분야 : 지식경영, 국제경영, 전략

www.kci.go.kr