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The Moderating Effect of Social Capital between Organizational Slack and Managerial Practices for Open Innovation in Venture SMEs

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Abstract

This research is designed to analyze the moderating effect of social capital between organizational slack and managerial practices for open innovation. After controlling the firm size, firm age, and environmental uncertainty, we test two hypotheses. First, we test the hypothesis that organizational slack has a positive effect on managerial practices for open innovation. Especially we focus on the managerial innovation and open innovation because recently managerial innovation and open innovation are more and more important. Second, we test the moderating role of social capital between organizational slack and managerial practices for open innovation. Because social capital is a kind of networking activity, we assume that social capital can contribute to managerial practices for open innovation through the networking activity. For this research, we administered the questionnaire surveys, and got the 250 effective data (companies) in Korea. Then we used the validity, reliability, correlation and multiple regression analysis by means of SPSS 18.0.

As a result, we can find the two meaningful results. First, organizational slack, especially not absorbed slack but unabsorbed slack, has positive effect on managerial practices for open innovation. It is because absorbed slack such as excessive facilities, machines, or employees is not useful in managerial practices for open innovation. On the other hand, unabsorbed slack is useful in managerial practices for open innovation because unabsorbed slack such as excessive money or securities is very flexible and active. Taken together, the relationship between managerial practices for open innovation and unabsorbed slack is proven in terms of flexibility. Second, social capital has a moderating effect positively between organizational slack, especially not absorbed slack but unabsorbed slack, and managerial practices for open innovation. A prior study related to the relationship between managerial practices for open innovation and social capital doesn't exist yet, so this analysis result is very meaningful in academic respect.

But this research has some limitations. First, this research is analyzed by limited region (Korea) and samples (250 companies), so more global regions and samples are recommended in the future. Second, we focus on managerial practices for open innovation in this paper, so the studies about technological practices for open innovation are recommended in the future.

Keywords : Organizational Slack, Managerial Practice, Open Innovation, Social Capital, Venture Firm, Moderating Effect

Ⅰ. Introduction

In the respect of organizational resources, the decision-making of having resources is a very important issue in the business field. It is because resources not only lower the risk but also raise the cost. That is, resources are related to the both risk and cost, and the relationship between risk and cost is an important trade-off. Especially the excessive resources of organization such as employees, facilities, machines, money, and securities are called the organizational slack.

In detail, we can divide 3 periods of trend for resources. First, organizational slack was regarded as necessary evil until 1980s. The emergent inventory was always needed to mass production at that time. Second, JIT (Just In Time) system of Toyota was regarded a best practice of SCM (Supply Chain Management) from 1980s to 1990s. The inventory was a waste of resources, and sharing resources without organizational slack with network partners was more beneficial. Third, as the high-tech and convergent industries caused by the innovation has been popular from 2000s(Kwon et al., 2014), once again organizational slack has got attention which is necessary to deal with customers' needs and to get trusts of customers. The organizational slack

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becomes indispensable and necessary for innovation, helps the flexibility, and reduces the risk in global business(Bae, 2015a).

Although the studies related to the relationship between organizational slack and innovation has been done until now, the results of prior studies are still mixed. For example, Bourgeois(1981), Singh(1986), Damanpour(1987), Bromiley(1991) insist that the relationship between organizational slack and innovation is a positive way. On the other hand, Nohria & Gulati(1996), George(2005) insist that relationship between organizational slack and innovation is a negative way(Bae, 2015b). Along these lines, organizational slack is a hot issue now, and prior studies suggest that the positive results of prior studies are more than the negative results(Drazin & Schoonhoven, 1996).

Traditionally, innovation is divided to product innovation, process innovation, and managerial innovation(Damanpour, 1991; Barney & Griffin, 1992; O'class & Weerawardena, 2009), and also divided to technological innovation and managerial (administrative) innovation(Evan, 1966). In detail, technological innovation contains product innovation and process innovation. As the importance of innovation is bigger than before, recently the practices for open innovation drew attention which is suggested by Chesbrough(2003). He defines open innovation as a paradigm that assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology. That is, open innovation is the innovation which is kinds of inward/outward networking and open business model in knowledge-based economy(Yun & Ryu, 2009).

And recently, developing or finding the moderating effect is practiced with activity. It is because the debates between organizational slack and innovation exist until now. For example, environmental uncertainty, ownership structure, HRM et al. are founded as the moderating variables(Bae, 2015a). With regards to the moderating variables, especially open innovation, the social capital is closely related to the networking, knowledge, and innovation(Huh, 2011). And, Nahapiet & Ghoshal(1998) suggest that social capital should be considered in terms of three clusters: structural, relational, and cognitive. So we can expect some links between social capital and open innovation as to the relational respect.

Taken together, we can expect the effect of organizational slack on managerial practices for open innovation, and the moderating effect of social capital in this paper. Moreover, the prior studies related to the relationship between managerial practices for open innovation and social capital doesn't exist yet, so this empirical analysis may be very useful in academic respect.

Ⅱ. Literature Review and Hypothesis

2.1 Organizational Slack and Managerial Practices for Open Innovation

2.1.1 Organizational Slack

The issue of organizational slack was begun from Cyert & March(1963). They suggested that organizational slack could help to adapt to the environmental uncertainty. According to the definitions of researchers, organizational slack can be defined as the excessive resources over necessary resources to manage the company.

Related to the definitions of prior studies, Bourgeois(1981) defines organizational slack as the cushion of actual or potential resources which allow an organization to adapt successfully to internal pressure for adjustment or to external pressures for change in policy, as well as to initiate changes in strategy with respect to the external environment. Nohria & Gulati(1996) defines organizational slack as more resources than available resources needed to produce the proper levels of output. Tan & Peng(2003) defines organizational slack as the buffer against the unexpected changes in the environment(Bae, 2015b).

There are different types of organizational slack. The popular classifications are absorbed slack and unabsorbed slack. In detail, absorbed slacks are resources that are set within the firm's procedures and are difficult to be redeployed elsewhere. On the other hand, unabsorbed slacks are resources that are deliberately uncommitted and can be redistributed easily elsewhere within the organization(Bourgeois, 1981; Singh, 1986; Tan & Peng, 2003). For example, excessive facilities, machines, and employees are absorbed slacks, whereas excessive money and securities are unabsorbed slacks. The most important difference between absorbed slack and unabsorbed slack is the flexibility of slack, and we also apply this classification(Bae, 2015a).

The theories about organizational slack are related to organization theory, agency theory, and contingency theory. First, in the respect of organization theory, organizational slack has a positive effect on corporate performance. For example, Singh(1986) suggests that high levelsof absorbed slack and unabsorbed slack contribute to high performance. Second, in the respect of agency theory, organizational slack has a negative effect on corporate performance. For example, Davis & Stout(1992) suggest that more cash flow (financial slack), more possibility of being taken over by competitors or potential competitors. Third, in the respect of contingency theory, organizational slack has reverse-U shape on the innovation(Nohria & Gulati, 1996).

2.1.2 Managerial Practices for Open Innovation

The original innovation concept started from the industrial

revolution after James Watt completed the improved steam engine. Then, Henry Ford changed the global society by conveyor system and 4S (Standardization, Specialization, Specification, Simplification). And, Steve Jobs made the innovative and convergent IT devices, and the design and technology of Apples created the new products and markets. Recently Google provides all employees with free time and lots of benefits for creativity. That is, innovation driven by creativity makes the global society and market more developed and convergent(Ahn et al., 2013), and innovation is the indispensable method to creative the core-competence and to survive in the long time.

According to the definitions of researchers, innovation can be defined as the process of making a core-competence through the new product, process and management. Related to the definitions of prior studies, Schumpeter(1934) defines innovation as the introduction of new products and process, the contract of new suppliers, the start-up of new rivals. Roberts(1988) defines innovation as the commercial process of developing and searching the product, process, and system. Amabile(1988) defines innovation as the process of converting the creative idea to the useful products or services. Kessler(2004) defines innovation as developing and executing of new system, policy, program, product, and service.

There are two types of innovation level. One is a personal level, and the other is a organizational level. For example, Janssen(2000) suggests that the personal character is the most important factor for innovation, but Pierce & Delbecq(1977) suggests the organizational character is the most important factor for innovation. In this paper, we focus on organizational level rather than personal level because we want to know the relationship between slack and innovation in the organizational perspective.

There are different types of innovation. The most popular classifications are product innovation, process innovation, and managerial innovation. In detail, product innovation is the competence to make new products or services. Process innovation is the competence to change the process for the effectiveness and efficiency. Managerial innovation is the competence to use the new management method(Damanpour, 1991; Barney & Griffin, 1992; O'class & Weerawardena, 2009). And, innovation also divided into technological innovation and managerial (administrative) innovation. In detail, technological innovation contains both product innovation and process innovation(Evan, 1966).

Additionally and recently, the practices for open innovation got attention which is suggested by Chesbrough(2003). He defines open innovation as a paradigm that firms use external ideas as well as internal ideas, and internal and external paths to market. He divides to inward open innovation and outward open innovation. In detail, inward open innovation is the innovation activity of getting ideas or technology from outside to inside. For example, joint-R&D, technology purchase, and venture investment are inward open innovation. On the other hand, outward open innovation is the commercial activity of giving technology from inside to outside. For example, technology sale and open-source project are outward open innovation(Ahn & Lee, 2011). That is, open innovation is the innovation activity which is kinds of inward/outward networking and open business model in knowledge-based economy(Yun & Ryu, 2009).

Overall, we focus on both managerial innovation and inward open innovation in this paper, because most prior studies of innovation traditionally focus on technological innovation and closed innovation. Especially, in the respect of managerial innovation, inward open innovation of introducing new management system is more common rather than outward open innovation. So we call it "managerial practices for open innovation" in this paper, and this point is one of the differentiations in academic respect.

2.1.3 Organizational Slack and Managerial Practices for Open Innovation(Hypothesis 1)

There are still hot debates related to the relationship between organizational slack and innovation. First, Bourgeois(1981), Damanpour(1987), Singh(1986) suggest that the organizational slack has a positive effect on innovation because organizational slack is not a waste but a potential resource for innovation. Second, Jensen(1986), Jensen & Meckling(1976) suggest that the organizational slack has a negative effect on innovation because the slack makes the employees to be relaxed and CEOs to be immoral. Third, Nohria & Gulati(1996), George(2005) suggest that the relationship between organizational slack and innovation has a reverse-U Shape(Bae, 2015a).

In this paper, we can assume that organizational slack has a positive effects on innovation because positive prior studies are more than negative prior studies(Drazin & Schoonhoven, 1996), and slack provides the employees and CEOs with the psychological stability of new trials and failures(Edmondson, 1999). Also, as slack contributes to make lots of alternatives, the decision-making and strategy in organization which has some slack are more flexible and profitable for innovation rather than competitors.

Along these lines, we can also assume that organizational slack has a positive effect on managerial innovation and inward open innovation because the two prior innovations are also kinds of innovation. So this reasoning leads to the first hypothesis.

H1: The organizational slack will be positively related to managerial practices for open innovation.

1-1: The absorbed slack will be positively related to managerial practices for open innovation.

1-2: The unabsorbed slack will be positively related to managerial practices for open innovation.

2.2 Moderating Effect of Social Capital (Hypothesis 2)

Social capital is the sum of practical and potential resources which are caused by the personal or organizational networks, and social capital should be considered in terms of three clusters: structural, relational, and cognitive(Nahapiet & Ghoshal, 1998). In detail, structural social capital contains network tie, network configuration, network density, and network centrality. Relational social capital contains trust, liability, and identity. Cognitive social capital contains sharing vision, goal, code, and language (Huh, 2011). And, Nahapiet & Ghoshal(1998) suggest that resources from networks (social capital) can be the sources for innovation.

In this context, Huh(2011) suggests that social capital contributes to knowledge creation and knowledge creation contributes to product innovation. That is, if the organization has more networks, it has more advantage of product innovation through the knowledge creation. That is, he proves the relationship among social capital, knowledge creation, and product innovation.

Along these lines, we can expect the some links between social capital and open innovation as to the network perspective although the prior studies related to the relationship between managerial practices for open innovation and social capital doesn't exist yet. So this empirical analysis may be very useful in academic respect, and this reasoning leads to the second hypothesis.

H2: The social capital positively moderates the relationship between organizational slack and managerial practices for open innovation.

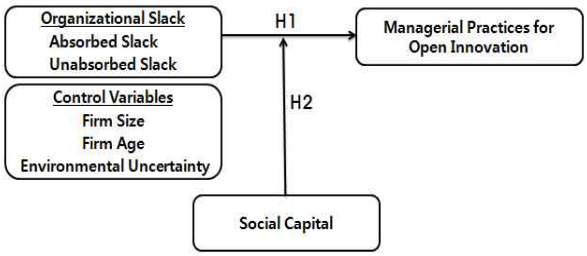
2-1: The social capital positively moderates the relationship between absorbed slack and managerial practices for open innovation.

2-2: The social capital positively moderates the relationship between unabsorbed slack and managerial practices for open innovation.

Ⅲ. Research Methods

3.1 Research Model

The hypothesized relationships are illustrated in this research model, as shown in Figure 1. In detail, organizational slack (absorbed slack and unabsorbed slack) is an independent variable. Social capital is a moderating variable. Managerial practice for open innovation is a dependent variable. Firm size, firm age, and environmental uncertainty are control variables.



<Figure 1> Research Model

3.2 Sample and Data Collection

The research model was designed to analyze the effect of organizational slack on managerial practices for open innovation focused on the moderating effect of social capital. For this purpose, questionnaire surveys were administered in companies in Korea from Nov. to Dec., 2013 (for 1 month). Then we gathered the effective 250 samples of company from top managers and CEOs. After gathering corporate samples, we used the frequency, validity, reliabilities, correlations and multiple regression analysis by means of SPSS 18.0.

3.3 Measurement

3.3.1 Organizational Slack(Independent Variable)

Organizational slack is commonly distinguished between absorbed slack and unabsorbed slack. So organizational slack, both absorbed slack and unabsorbed slack, is measured with respective 8 items using a five point Likert scale based on Luca & Atuahene-Gima(2007). The measures are: (1) enough resources to achieve the vision(2) enough resources to achieve the strategy(3) available resources promptly for the new strategy(4) available resources supported for unscheduled strategy(5) available resources at the CEO's discretion(6) enough resources to apply new products by comparing with competitors;(7) enough resources to apply new process by comparing with competitors; and(8) enough resources to apply new management system by comparing with competitors.

3.3.2 Managerial Practices for Open Innovation(Dependent Variable)

Managerial Practice for open innovation is measured with 3 items using a five point Likert scale based on managerial innovation(Evan, 1966) and open innovation(Chesbrough, 2003). The measures are: (1) to be more creativity of new inward

management system than competitors; (2) to be more entrepreneurship of new inward management system than competitors and (3) to be more CEO's effort to change the management system from outside to inside than competitors.

3.3.3 Social Capital (Moderating Variable)

Social capital is measured with 10 items using a five point Likert scale based on Nahapiet & Ghoshal(1998). The measures are: (1) cooperation with all staffs in division; (2) close cooperation with colleagues; (3) close cooperation with seniors; (4) good communication with other division; (5) sincerity of colleagues; (6) trust of colleagues; (7) sincerity of other division; (8) sharing the goal of company; (9) sharing the vision of company; and (10) common goal of our division.

3.3.4 Firm Size, Firm Age, and Environmental Uncertainty (Control Variables)

We put firm size, firm age, and environmental uncertainty into control variables. First, generally more firm size, less efficient and innovative based on Scherer & Rose(1990). So we measured firm size by "numbers of employee". Second, generally more firm age, less flexible and innovative. So we measured firm age by questioning the "year of establishment" and use "2014- year of establishment". Third, dynamics of environment generally may make lots of difficulties of innovating themselves based on Bae(2015a). So Ettlie & Resa(1992) define environmental uncertainty as the unexpected changes of customers, suppliers, competitors and technology, and environmental uncertainty is measured with 4 items using the five point Likert scale. The measures are: (1) intensity of changing customers' needs for last 3 years; (2) intensity of changing suppliers'design, quality, and delivery for last 3 years; (3) to be more difficulty of expecting the competitors for last 3 years; and (4) intensity of technological changes for last 3 years.

Ⅳ. Analysis and Results

4.1 Characteristics of Sample

We surveyed companies in Korea, and the characteristics of sample were analyzed by the frequency analysis. As a result of the effective 250 companies, 10~300 employees were 177 responses(70.8%), and under 10 employees were 73 responses(29.2%). And, the establishment ages were minimum in 1947, maximum in 2013, and average in 1998.

4.2 Validity and Reliability

We verify the validity and reliability prior to performing multiple regression analysis of the hypotheses by means of SPSS 18.0. To check the validity, exploratory factor analysis was performed using the principle components analysis with the varimax rotation. If the eigenvalues were over 1.0 and factor loadings were over .5, the validity was generally acceptable. The result of validity was generally acceptable because the eigenvalues of all variables were exceeded 2.36 and all factor loadings were exceeded .71 as Table 1. After the verification of validity, the reliability was tested by the Cronbach's α values. If the Cronbach's α values were over .6, the reliability was generally acceptable. The results of reliability were generally acceptable because the Cronbach's α values of all variables were exceeded .85.

<Table 1> Validity and Reliability

Variable	Items	Factor Loadings	Eigen Value	% of Variance	Cumulative (%)	Cronbach's α
Absorbed Slack	3	.818	5.768	17.478	17.478	.945
	4	.783				
	1	.778				
	2	.775				
	6	.765				
	5	.758				
	7	.728				
	8	.714				
Un-absorbed Slack	2	.861	6.686	20.259	37.737	.969
	1	.840				
	6	.836				
	7	.832				
	4	.825				
	5	.818				
	3	.812				
	8	.807				
Social Capital	6	.867	6.961	21.094	58.831	.947
	2	.848				
	7	.847				
	5	.838				
	8	.814				
	3	.807				
	1	.805				
	4	.785				
	10	.781				
	9	.710				
Managerial Practices for Open Innovation (MPOI)	2	.865	2.356	7.139	65.970	.897
	1	.803				
	3	.775				
Environ-mental Uncertainty	1	.829	2.822	8.551	74.521	.845
	2	.821				
	3	.806				
	4	.780				

4.3 Correlations

The descriptive statistics and correlations among the variables were shown as Table 2. According to the correlation analysis, most correlations were significant and supported for this research model.

<Table 2> Descriptive Statistics and Correlations

	Mean	S.D.	1	2	3	4	5	6	7
1	1.81	.60	1						
2	16.34	12.13	.424**	1					
3	3.13	.67	.163**	.090	1				
4	2.90	.70	.228**	.197**	.157*	1			
5	2.84	.78	.291**	.240**	.143*	.733**	1		
6	3.70	.58	.127*	-.010	.237**	.185**	.182**	1	
7	3.23	.72	.237**	.099	.334**	.372**	.381**	.436**	1

Note 1) 1.Firm Size 2.Firm Age 3.Environmental Uncertainty
4.Absorbed Slack 5.Unabsorbed Slack 6.Social Capital
7.Managerial Practices for Open Innovation
Note 2) * p<.05, ** p<.01 (2-tailed)

4.4. Hypothesis Testing

4.4.1 Impact of Organizational Slack on Managerial practices for open innovation(Hypothesis 1)

The multiple regression analysis was used to test hypothesis 1, and the results were shown as Table 3. As a result, β of absorbed slack on managerial practices for open innovation was .158(p=.060) and β of unabsorbed slack on managerial practices for open innovation was .217(p=.012). That is, after the firm size, firm age, and environmental uncertainty were controlled, not absorbed slack but unabsorbed slack had significantly a positive effect on managerial practices for open innovation. F value was 15.204 at p=.000 and R^2 of regression was .244(24.4%). So we accept H1-2(impact of unabsorbed slack on managerial practices for open innovation), but reject H1-1(impact of absorbed slack on managerial practices for open innovation).

This finding indicates that unabsorbed slack such as excessive money and securities can contribute to the organizational flexibility, reduce the management risk, motivate the new trials, and think out the creative approach. Absorbed slack such as excessive facilities, machines, and employees, however, is already stuck on the organization, so it is no use for managerial practices for open innovation. Overall, organizational slack, specially unabsorbed slack, is not a waste but a practical resource for open innovation, and organizations have to take special care of the unabsorbed slack in business field.

<Table 3> Results of Multiple Regression Analysis

Variable	(Dependent Variable) Managerial Practices for open innovation	
	β (t-value)	Sig.
(Control Variables)		
Firm Size	.105 (1.629)	.105
Firm Age	-.052 (-.823)	.412
Environmental Uncertainty	.256 (4.431)	.000
(Independent Variables)		
Absorbed Slack	.158 (1.888)	.060
Unabsorbed Slack	.217 (2.535)	.012
R^2	.244	
F Value	15.204	.000

4.4.2 Moderating Effect of Social Capital (Hypothesis 2)

According to the Baron & Kenny(1986), Cohen & Cohen(1983), the hierarchical regression analysis was used to test hypothesis 2. The result was shown as Table 4 & Figure 2. In detail, the multiple regression analysis was executed among control variables, organizational slack, and managerial practices for open innovation at level 1. Then, the multiple regression analysis was executed among control variables, organizational slack, social capital, and managerial practices for open innovation at level 2. Finally, the multiple regression analysis was executed among control variables, organizational slack, social capital, interaction(organizational slack × social capital) and managerial practices for open innovation at level 3.

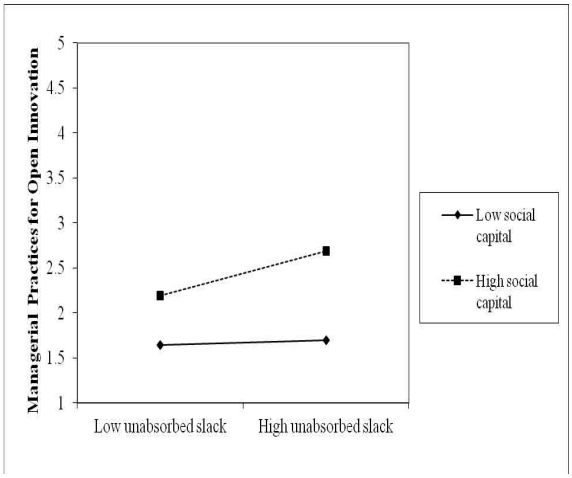
As a result of verifying the moderating effect(H2-1, H2-2), social capital had no moderating effect between absorbed slack and managerial practices for open innovation because β of the interaction between absorbed slack and social capital was -.457 (p=.487). Social capital, however, positively moderated the relationship between unabsorbed slack and managerial practices for open innovation because β of the interaction between unabsorbed slack and managerial practices for open innovation was 1.243(p=.044). Additionally, changes of R^2($\triangle R^2$) were significantly increased by .096(level2) and .016(level3) at the level of significance. Especially, as β of social capital was -.027(p=.906), social capital is regarded as pure moderator variable. So we accept H2-2(moderating effect of social capital), but reject H2-1(no moderating effect of social capital).

This finding indicates that if social capital is increased, the effect of unabsorbed slack on managerial practices for open innovation is also increased. It is because social capital contributes to inward networking and knowledge creation, and they also contribute to inward open innovation moderately and indirectly in the end. Overall, the more social capitals there are, the more chances are that unabsorbed slack affects managerial practices for open innovation.

<Table 4> Results of Moderated Regression Analysis

Variable	(Dependent Variable) Managerial Practices for open innovation		
	Level 1 (â)	Level 2 (â)	Level 3 (â)
Firm Size	.105	.075	.088
Firm Age	-.052	-.018	-.036
Environmental Uncertainty	.256*	.188**	.190**
Absorbed Slack (A)	.158	.137	.471
Unabsorbed Slack (B)	.217*	.184*	-.791
Social Capital (C)		.326**	-.027
A × C			-.457
B × C			1.243*
R^2	.244	.340	.356
$\triangle R^2$		.096	.016
F Value	15.204	20.213	16.098

Note 1) * p<.05, ** p<.01



<Figure 2> Moderating Effect Graph

Ⅴ. Discussion and Conclusions

5.1 Contributions and Implications

The goal of this paper is to verify the impact of organizational slack on managerial practices for open innovation and the moderating effect of social capital. To test hypotheses, the 250 companies in Korea were analyzed by questionnaire surveys and SPSS 18.0.

The empirical results show meaningful findings. First, unabsorbed slack had a positive effect on managerial practices for open innovation after the firm size, firm age, and environmental uncertainty were controlled. Second, social capital positively moderated the relationship between unabsorbed slack and managerial practices for open innovation. On the other hand, absorbed slack had no effect on managerial practices for open innovation, and social capital had no moderating effect between absorbed slack and managerial practices for open innovation.

Accordingly, these results have some contributions and implications. First, we can find the importance of unabsorbed slack in organizations, and unabsorbed slack can be source for managerial practices. Second, social capital which is related to the networks and knowledge creation has the improving role indirectly between unabsorbed slack and open innovation. Third, these results suggest the new business model related to slack, open innovation, and social capital for the first time. It is because a prior study related to the relationship between managerial practices for open innovation and social capital doesn't exist yet.

5.2 Limitations and Future Research Directions

But this research has some limitations. First, this research is analyzed by limited region (Korea) and samples(250 companies), so more global regionsand samples are recommended in the future. Second, we focus on managerial practices for open innovation in this paper, so the studies about technological practices for open innovation are recommended in the future. Third, the studies of researching the relationship among organizational slack, open innovation, corporate strategy, and entrepreneurship are recommended in the future because the environment of organization is becoming more and more complex in global markets.

REFERENCE

Ahn, C., & Lee, Y.(2011), An empirical analysis of the influence factors on open innovation activities in Korea, *Journal of Korea Technology Innovation Society*, 14(3), 431-465.

Ahn, K., Park, R., & Chang, K.(2013), Application of knowledge management system for small and medium business, *Asia-Pacific Journal of Business Venturing and Entrepreneurship*, 8(4), 111-118.

Amabile, T. M.(1988), A model of creativity and innovation in organization, *Research in Organizational Behavior*, 10(1), 123-167.

Bae, H.(2015a), The effects of organizational slack on technological innovation: Moderating effect of environmental uncertainty, T*he Journal of Industrial Innovation*, 31(2), 163-185.

_____(2015b), The mediating effect of corporate reputation between the organizational slack and corporate performance in venture SMEs, *Asia-Pacific Journal of Business Venturing and Entrepreneurship*, 10(2), 17-25.

Barney, J. B., & Griffin, R.(1992), *The Management of organizations: Strategy, structure and behavior*, Houghton Mifflin, Boston, MA.

Baron, R. M., & Kenny, D. A.(1986), The moderate-mediator variable distinction in social psychological research: conceptual, strategic and statistical considerations, *Journal of Personality and Social Psychology*, 51, 1173-1182.

Bourgeois.(1981), On the measurements of organizational slack, *Academy of Management Review,* 6(1), 29-39.

Bromiley, P.(1991), Testing a causal model of corporate risk taking and performance, *Academy of Management Journal*, 34(1), 37-59.

Chesbrough, H.(2003), *Open innovation: the new imperative for creating and profiting from technology*, Boston; Harvard Business School Press.

Cohen, J., & Cohen, P.(1983), *Applied multiple regressional correlation analysis for the behavioral science (2nd ed)*, Hillsdale, NJ, Erlbaum,

Cyert, R. M., & March, J.(1963), A behavioral theory of the firm, Englewood Cliffs, NJ, Prentice-Hall.

Damanpour, F.(1987). The adoption of technological, administrative, and ancillary innovations: impact of organizational factors, *Journal of Management*, 13(4), 675-688.

Damanpour, F.(1991), Organizational innovation : a meta-analysis of effects of determinants and moderators, *Academy of Management Journal*, 34(3), 550-590.

Davis, G. F., & Stout, S. K.(1992), Organization theory and the market for corporate control: A dynamic analysis of the characteristics of large takeover targets, 1980-1990, *Administrative Science Quarterly*, 37(4), 605-633.

Drazin, R., & Schoonhoven, C. B.(1996), Community, population, and organization effects on innovation: A multilevel perspective, *Academy of Management Journal*, 39(5), 1065-1083.

Edmondson, A.(1999), Psychological safety and learning behavior in work teams, *Administrative Science Quarterly*, 44(2), 350-383.izational integration and process innovation, *Academy of Management Journal*, 35(4), 795-837.

Evan, W. M.(1966), Organizational Lag, *Human Organizations*, 25, 51-53.

George, G.(2005), Slack resources and the performance of privately held firms, *Academy of Management Journal*, 484, 661-676.

Huh, M.(2011), Social capital, knowledge creation, and innovation, *Korean Journal of Management*, 19(1), 41-78.

Janssen.(2000), Job demands, perceptions of effort-reward fairness and innovative work behaviour, *Journal of Occupational and Organizational Psychology,* 73(3), 287-302.

Jensen, M. C., & Meckling, W. H.(1976), Theory of the firm : Managerial behavior, agency costs and ownership structure, *Journal of Financial Economics*, 3(4), 305-360.

Jensen, M. C.(1986), Agency costs of free cash flow, corporate finance, and takeovers, *American Economic Review*, 76(2), 323-329.

Kessler, E. H.(2004), Organizational innovation: a multi-level decision-theoretic perspective, *International Journal of Innovation Management*, 8(3), 275-295.

Kwon, K. J., Seo, H. D., Jang, S. S., & Park, J. H.(2014), A comparative study on the price competitiveness of korean beef(hanwoo) in china: An analysis based on market research focusing on beijing and shanghai, *Asia-Pacific Journal of Business Venturing and Entrepreneurship*, 9(5), 221-234.

Luca, L. M., & Atuahene-Gima, K.(2007), Market Knowledge dimensions and cross- functional collaboration : Examining the different routes to product innovation performance, *Journal of Marketing*, 71, 95-112.

Nahapiet, J., & Ghoshal, S.(1998), Social capital, intellectual capital, and the organizational advantage, *Academy of Management Review,* 23(2), 242-266.

Nohria, N., & Gulati, R.(1996), Is good or bad for innovation?, *Academy of Management Journal*, 39(5), 1245- 1264.

O'class, A., & Weerawardena, J.(2009), Examining the role of international entrepreneurship, innovation and international market performance in SME internationalisation, *European Journal of Marketing*, 43(11), 1325-1348.

Pierce, J. L., & Delbecq, A. L.(1977), Organization structure, individual attitude and innovation, *Academy of Management Review*, 2(1), 27-37.

Roberts, E. B.(1988), Managing invention and innovation, *Research Technology Management*, 31(1), 11-29.

Scherer, F. M., & Rose, D.(1990), *Industrial Market Structure and Economic Performance*, Rand McNally, Chicago.

Schumpeter, J. A.(1934), *The theory of economic development,* Cambridge, MA, Harvard University Press.

Singh, J. V.(1986), Performance, slack, and risk taking in organizational decision making, *Academy of Management Journal*, 29(3), 562-585.

Tan, J., & Peng, M. W.(2003), Organizational slack and firm performance during economic transitions : two studies from an emerging economy, *Strategic Management Journal,* 24, 1249-1263.

Yun, J. H., & Ryu, G.(2009), A preliminary study on the theory of korea open innovation, *International Commerce and Information Review*, 11(2), 203-230.

벤처중소기업의 조직여유와 개방형 경영혁신 간의 관계에서 사회적 자본의 조절효과 연구

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국 문 요 약

본 연구는 벤처중소기업의 조직여유와 개방형 경영혁신 간의 관계에서 사회적 자본의 조절효과를 분석하기 위한 실증분석 연구이다. 즉 기업규모, 기업연령, 환경 불확실성을 통제한 뒤, 다음의 두 가지 가설을 검증하였다. 첫 번째 가설은 벤처중소기업의 조직여유(흡수된 여유, 흡수되지 않은 여유)가 개방형 경영혁신에 유의한 긍정적인 영향을 미치는 지 여부이다. 두 번째 가설은 벤처중소기업의 조직여유(흡수된 여유, 흡수되지 않은 여유)와 개방형 경영혁신 간의 관계에서 사회적 자본이 긍정적인 조절역할을 수행하는 지 여부이다.

이와 같은 가설을 검증하기 위해 설문지법을 사용하여 유효한 250개의 기업수준 데이터를 확보하였다. 또한 실증분석은 SPSS 18.0을 통해 빈도분석, 타당도분석, 신뢰도분석, 상관분석, 회귀분석을 실시하였다.

이러한 실증분석 결과, 두 가지 의미 있는 결과를 도출하였다. 첫째, 벤처중소기업의 조직여유 유형 중 현금, 유가증권 등과 같은 흡수되지 않은 여유는 개방형 경영혁신에 유의한 정(+)의 영향을 미쳤으나, 초과인력, 초과설비 등과 같은 흡수된 여유는 개방형 경영혁신에 유의한 영향을 미치지 않았다. 이는 흡수되지 않은 여유가 흡수된 여유에 비해 유연하고 활동적이어서 개방형 혁신에 긍정적인 영향을 미칠 수 있음을 의미한다. 둘째, 벤처중소기업에서의 사회적 자본은 유연하게 활용 가능한 흡수되지 않은 여유와 개방형 경영혁신 간의 관계를 긍정적으로 조절하는 반면, 이미 조직에 흡수되어 버린 흡수된 여유와 개방형 경영혁신 간의 관계는 조절하지 못함이 나타났다. 이 연구 결과는 사회적 자본과 개방형 혁신 간의 관계를 연구한 기존 선행연구가 거의 없기에 더욱 의미를 가질 것으로 기대된다.

핵심주제어 : 조직여유, 개방형 경영혁신, 사회적 자본, 벤처기업, 조절효과

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