

The Impact of Vertical and Horizontal Network Embeddedness on Foreign Subsidiary Performance in Korea*

Young-Ryeol Park ■ Yonsei University**

Jung Min Son ■ Inje University***

〈Abstract〉

This paper examines the impact of embeddedness on subsidiary performance in a local network. Embeddedness is classified into vertical embeddedness(embeddedness in a local network of suppliers and distributors), and horizontal embeddedness (embeddedness in a local network of allied firms and associations). We assume that vertical embeddedness promotes subsidiary performance by increasing the exploitation of old knowledge, whereas horizontal embeddedness enhances subsidiary performance by developing the exploration of new business opportunities. With data collected from a questionnaire survey of 121 subsidiaries, we find that horizontal embeddedness, not vertical embeddedness, increases subsidiary performance. This result presents that the impact of embeddedness on subsidiary performance in a local network differs, depending on the type of embeddedness. Horizontal embeddedness, in particular, enables a subsidiary to combine its own specific advantage with the distinctive knowledge obtained from local allied firms and associations into creating new, local-specific knowledge, which contributes to its performance.

*Key Words: Network embeddedness, Subsidiary performance, Exploitation,
Exploration

* This work was supported by a grant from Inje University for the Research in 20180029

** First Author, Professor, School of Business, Yonsei University (E-mail: yrpark@yonsei.ac.kr)

*** Corresponding Author, Associate Professor, School of Business, Inje University (E-mail: jmson@inje.ac.kr)

I . Introduction

The activities of a firm associated with various actors, such as suppliers, distributors, or competitors create social relationships with them accordingly. Social relationships are a concomitant phenomenon of a firm's activities that have the capacity to provide firms new competitive advantages under knowledge-based economies(Burt 1992; Tsai 2001; Uzzi 1996). This is because the firm can use social relationships as a selective and informal means of acquiring distinctive knowledge(Andersson et al. 2002; Granovetter 1985; Inkpen & Tsang 2005; Moran 2005; Uzzi 1997).

To utilize concrete social relationships, firms establish a variety of networks, such as technology networks(Håkansson 1989), local networks(Dicken 1992), business networks(Hägg & Johanson 1982; Hernandez et al. 2014), and society networks Granovetter 1973), and share information and knowledge among themselves within the respective networks. With the knowledge obtained from these networks, firms are able to enhance operational efficiency or create new value(March 1991). However, knowledge acquisition from the networks depends on the degree of the firm's network embeddedness(Inkpen & Tsang 2005). The degree of network embeddedness shows the extent to which a firm applies social relationships to its economic behaviors(Granovetter 1985; Mohr & Spekman 1994; Naude & Buttle 2000; Uzzi 1996, 1997). Therefore, embedded firms in a certain network are able to apply social relationships as an external knowledge source and a means of building trust among network members and asking cooperation to solve diverse problems(Gulati & Gargiulo 1999; Mohr & Spekman 1994; Powell 1990; Uzzi 1996).

Obviously, foreign firms starting up their operations in a host country experience difficulty gathering local market information and knowledge(Hymer 1976), due to unfamiliarity with a local environment, which is critical to their survival and success(Gulati et al. 2000; Uzzi & Gillespie 2002). Lack of local market information and knowledge is a

liability to foreign firms(Hennart 1982; Hymer 1976; Luo 2002; Zaheer 1995), and places them at a disadvantage when competing with incumbent competitors, in that foreign firms are denied access to local resources(Andersson et al. 2002). This limits the extent of their local activities(Luo & Mezias 2002; Zaheer 2002), making it difficult for them to apply their firm-specific advantages under local conditions(Nachum 2003).

Network embeddedness attracts researchers' attention(Uzzi 1997) as a means of acquiring external knowledge, and yet, the relation between embeddedness and subsidiary performance in local networks has not been fully explored. Moreover, empirical researches that examine the effects of the extent of network embeddedness on a firm's performance are few(e.g., Andersson et al. 2001, 2002; Uzzi 1997), which requires further investigation from diverse aspects.

The aim of this paper is twofold. First, we examine the effect of local network embeddedness on the performance of a subsidiary. We classify embeddedness into vertical embeddedness(embedded in a local network of suppliers and distributors), and horizontal embeddedness(embedded in a local network of allied firms and associations), and test the impact of the respective embeddedness on the subsidiary's performance. Second, we explore whether the impact of network embeddedness on subsidiary performance differs depending on the types of local network embeddedness. This paper contributes to the development of the network theory by offering a new classification of network embeddedness, and shows the different impact of network embeddedness on subsidiary performance according to the characteristics of the network embeddedness. Also, this paper suggests a successful local strategy through which subsidiaries can acquire local-specific knowledge via network embeddedness.

The following section reviews previous research on network embeddedness, and then derives an hypothesis. The third section presents the data and methodology, including operationalization of variables. The fourth section reports results, while the final section presents concluding remarks, contributions, and limitations.

II. Local Network Embeddedness and Subsidiary Performance

1. Local Network Embeddedness and Performance

Embeddedness is a concept that holds that social relationships among actors influence their economic behaviors(Granovetter 1985; Mohr & Spekman 1994; Naude & Buttle 2000; Uzzi 1996, 1997). The term embeddedness is derived from Polanyi(1944), and its economic effects on a firm's activities are researched by Schumpeter(1950), and Granovetter(1985). Since then, the subject has attracted many researchers, and is the subject of much current interest(Gulati et al. 2000; Uzzi 1997).

Network embeddedness focuses on social relationships of interorganization, rather than individual ones, so that a firm can embed itself in a variety of networks composed of other firms or organizations(Granovetter 1985, 1992). And the degree of a firm's network embeddedness indicates the degree of interdependence and adaptation between the firm and other members in that network(Andersson et al. 2002).

Network embeddedness is explained by several different types. Focusing on the characteristics of the subject in which firms are embedded, embeddedness is divided into four types: structural, cognitive, cultural, and political(Zukin & DiMaagio 1990). According to Inkpen & Tsang(2005), embeddedness is classified into suppliers' network, distributors' network, and venture capital network embeddedness. There are more classifications of sponsorship-based and partnership-based linkages(Lee et al. 2001), relational and structural embeddedness(Andersson et al. 2002). As introduced above the types of network embeddedness vary due to the diverse means of defining a network which can easily be linked up with others(Forsgren & Pedersen 1998).

Network embeddedness is characterized by multiple linkages between network members so that a variety of activities, business practices,

institutions, and experiences is shared within the network. This characteristic enables network members to share or access diverse information and knowledge, and it keeps them credible partners who can consistently benefit from their social relationship. Network embeddedness thus gives a firm an important guideline to do business, by offering distinctive and trustworthy knowledge, cooperation, and business opportunities (Andersson et al. 2002; Gulati & Gargiulo 1999; Moran 2005; Uzzi 1996, 1997), and improving organizational adaptation (Baum & Oliver 1992) and its legitimacy (Ahuja & Yayavaram 2011; Lee et al. 2001). Previous research (e.g., Andersson et al. 2002; Granovetter 1985; Moran 2005; Uzzi 1997) proves that the degree of network embeddedness is positively related to a firm's performance.

As for a subsidiary, the acquisition of local market information and knowledge is critical to its survival, and even success (Nachum 2003; Zaheer & Mosakowski 1997). Although the subsidiary has substantial firm-specific advantages in penetrating a local market, it is a complete stranger in this market and faces an unexpected market situation in terms of a discriminative government policy or competitive structure, which causes foreignness to be a liability (Hymer 1976; Zaheer 1995). This liability comes from a lack of local information and knowledge, and puts the firm at an immediate disadvantage in relation to its local peers. Firstly, the subsidiary faces difficulties in using its home market-accumulated, firm-specific advantages in the local market (Dunning 1980; Nachum 2003). Secondly, the subsidiary may be treated as an alien due to its lack of legitimacy, and then excluded from local business opportunities (Hymer 1976), or even denied access to strategic local resources (Andersson et al. 2002; Luo & Mezias 2002). Therefore, the degree of subsidiary embeddedness in various types of local networks helps the subsidiary overcome all these difficulties derived from the liability of foreignness by offering local-specific information and knowledge, resources, or business opportunities, which enhance its performance.

Although the disadvantageous situation a subsidiary faces may get

better as that subsidiary acquires market knowledge with time, local network embeddedness that affects subsidiary competitiveness and performance still remains important. Local networks provide a special set of network members' knowledge bases containing a variety of experience about exploitation(to exploit old knowledge) or exploration(to explore new business opportunities) activities. Using these knowledge bases, an embedded subsidiary in those local networks, showing high interdependence and adaptation with network members, curtails those costs related to exploitation and exploration activities. Therefore, as the degree of subsidiary local network embeddedness increases, the subsidiary gets better at promoting its exploitation and exploration.

2. Vertical Embeddedness in Local Networks and Performance

The most important aspect of network embeddedness is that it is associated with organizational learning: exploitation or exploration. A subsidiary embedded in various local networks that interactively exchanges or adapts information and knowledge with network members is able to indirectly experience the experience of the network's members and share refined knowledge through trial and error, which accelerates its organizational learning(Cohen & Levinthal 1990).

Then, is there any specific network that gives an efficient means of acquiring knowledge affecting subsidiary performance? Previous empirical research has explored the answer to this. For instance, Lee et al.(2001) verified that embeddedness in a venture capital network enhances technology-based venture performance; and Andersson et al.(2001, 2002) reported that the technical embeddedness in a suppliers' and distributors' network impacts positively on firm performance.

The next important question is: Is there a specific local network whose knowledge or capability a subsidiary can efficiently exploit, or through which it can explore new possibilities? In the local market the subsidiary needs local-specific knowledge for successful exploitation, as well as

exploration. Exploitation is closely related to those terms of production, refinement, choice, and execution which focus on cost reduction to maximize efficiency ; exploration, on the other hand, is related to experimentation, search, risk-taking, flexibility, and innovation, which puts more emphasis on new value creation(Levinthal & March 1993; March 1991).

As each network has its own attributes, the knowledge shared in each network is distinctive(Uizzi 1997). We therefore categorize local networks into two types, vertical and horizontal networks, according to the characteristics of network members and their embedded knowledge.

A vertical network can be distinguished on a basis of the channel structure which includes local suppliers and distributors(Halinen & Törnroos 1998). Therefore, embedded knowledge in a vertical network is mainly about local market-specific knowledge that increases operational efficiency via a reduction in procurement costs of raw materials, production costs, or costs of inbound and outbound logistics, for instance, and this expedites the subsidiary's knowledge exploitation activity. Subsidiaries can access to novel information and knowledge through relationships with vertical network members and then can combine it with its existing technological knowledge and competences to achieve their exploitation goals for improved operational efficiency and returns(Arranz et al. 2018; March 1991).

According to the above discussion we hypothesize the relation between vertical network embeddedness(termed as vertical embeddedness) and subsidiary performance as follows.

H1 : Vertical embeddedness of the subsidiaries in local networks increases their performance

3. Horizontal Embeddedness in Local Networks and Performance

Whereas, a horizontal network includes incumbent firms engaged in the same or related industrial sectors and associations, where network members share more technology related knowledge compared to the vertical network. Technological trends, institutional changes, and strategic cooperation or alliance-related information is a matter of common interest in this network. In a horizontal network, these heterogeneous sources of information and knowledge allow one of its network members, a subsidiary, to explore new innovations and future profits(Rothaermel & Deeds 2004). Since exploration aims to find new and technology-based business opportunities(Rowley et al. 2000), horizontally embedded subsidiaries can conduct its exploration activities to capture new potential business opportunities.

According to the above discussion we hypothesize the relation between horizontal network embeddedness(termed horizontal embeddedness) and subsidiary performance as follows.

H2 : Horizontal embeddedness of the subsidiaries in local networks increases their performance.

III. Methodology

1. Data

The Korean market is one of the fastest growing and dynamic markets in the world and is particularly suitable for subsidiaries to exploit their firm-specific advantages and explore new possibilities. Therefore, we use foreign subsidiaries in the Korean market as a sample. The sample is extracted from Kis-line, produced by the Korea Investors Service, a provider of independent credit ratings, researches and financial

information to the capital markets. We extracted 309 subsidiaries that met the following conditions: 1) Established between 1990 and 2003, to exclude the problem of liability of newness(Zaheer & Mosakowski 1997; Zimmerman 2002); 2) Ownership of more than 10% as of 2005; 3) Manufacturer with over 10 employees with production facilities in Korea. With the sample, we conducted a survey by e-mail, fax, and telephone and collected 121 questionnaires.

<Table 1> shows number of sample by industry. By region, there are 34 in the US(28.1%), 47 in Japan(38.84%), 32 in Europe(26.45%), 6 in Asia(4.96%), and 2 in other regions(1.65%). Japanese and US companies make up more than the half of the data.

<Table 1> Sample description

Industry	No. of sample	Percentage(%)
Food	4	3.3
Textiles · apparel	2	1.7
Paper · wood	2	1.7
Chemical products	21	17.4
Pharmaceutical products	1	0.8
Metal products	5	4.1
Machinery	29	24.0
Electrical · electronic products	29	24.0
Transportation equipment	6	5.0
Others	22	18.2
Total	121	100

2. Variables

All variables employed in this paper are extracted from a questionnaire, which requires response on a 7-point Likert-type scale.

Subsidiary performance, an independent variable, is measured by average sales growth, ROI, the extent of improvement in national or international competitiveness, and the extent of satisfaction in overall performance over the past three years in the local market. Network embeddedness in local networks is defined as the degree of interdependence and adaptation between a subsidiary and the network members. Vertical network embeddedness is thus measured by both the degree of dependency on local suppliers and distributors network in gaining product, technology, or market-related knowledge, and the degree of its adaptation to the subsidiary's business practice and product development. Similar to vertical network embeddedness, horizontal network embeddedness is operationalized by the degree of dependency on the network of local allied firms and associations. These measurements are referred to by Andersson & Forsgren(1996, 2000) and Andersson et al.(2002). Subsidiary-specific advantages, of age, size, ownership structure, and industry growth rate are controlled, and these are summarized below.

〈Table 2〉 Measurement of variables

Variables	Measurement	Cronbach's α
Performance	Average sales growth, ROI, improvement in national or international competitiveness, and satisfaction with overall performance over the past three years in a local market	0.884
Vertical embeddedness	Degree of dependency on local suppliers' and distributors' network to gain product, technology, or market-related knowledge, and the degree of its adaptation to a subsidiary's business practice and product development	0.860
Horizontal embeddedness	Degree of dependency on local allied firms' and associations' network to gain product, technology, or market-related knowledge and the degree of its adaptation to a subsidiary's business practice and product development	0.794

Variables	Measurement	Cronbach's α
FSA	Technical assets(international reputation of its products, degree of advanced technology in products or process), financial assets (investment size, financial soundness, fund-raising capability), relational assets(extent of trust in local suppliers, distributors, government or public institutions, banks or financial institutions), human assets(human resources' capability of sale, promotion, technical support, market survey, and government-related affairs)	0.886
Age	Log(2005 - establishment year)	n/a
Size	Total amount invested in subsidiary	n/a
WOS	Over 95% of ownership as of 2005, 1 otherwise, 0	n/a
Industry growth rate	Industry average growth rate for three years from 2002 to 2004	n/a

Based on collected data, we perform factor analysis to get variables and then multiple regression analysis. Prior to the regression analysis we examine the correlation among variables. As shown in <Table 3>, multicollinearity appears not to be a problem.

<Table 3> Descriptive statistics and correlation of variables

Variables	Mean	S.D.	1	2	3	4	5	6	7
1. Performance	0.002	0.829							
2. Vertical embeddedness	4.849	1.150	0.259***						
3. Horizontal embeddedness	4.033	1.205	0.310***	0.543***					
4. FSAs	5.247	0.862	0.474***	0.461***	0.321***				
5. Age	0.802	0.201	0.089	0.030	0.001	0.037			
6. Size	587.909	1647.418	0.145	0.112	0.079	0.184*	-0.186*		
7. WOS	0.463	0.501	0.037	-0.019	-0.195*	0.201*	0.068	0.045	
8. Industry growth rate	8.224	2.788	0.175	0.061	-0.002	0.076	0.219*	-0.195*	-0.038

*:p<0.1, **:p<0.05, ***:p<0.01(two-tailed)

Common method bias may be a concern when self-report questionnaires are used to collect data from the same respondents(Podsakoff & Organ 1986). To avoid or correct common method bias a post hoc Harman's single-factor analysis is widely used to check whether common method variance may significantly influence the data analysis(Chang et al. 2010).

We tested common method bias with Harman's single-factor test to control possible systematic bias in our exploratory factor analysis(Podsakoff et al. 2003). The test showed that there is no significant common method bias in our data since the calculated variance(28.491%) is below 50%.

IV. Empirical results

To test the hypotheses we perform multiple regression analysis, and <Table 4> shows the results of it.

<Table 4> Multiple regression results

Variables	Expected sign	Results
(constant)		-3.002(-5.966)***
Vertical embeddedness	+	-.044(-.604)
Horizontal embeddedness	+	.140(2.069)**
FSAs	+	.391(4.291)***
Age	+	.254(.743)
Size	+	.000(1.226)
WOS	-	-.016(-.114)
Industry growth rate	+	.046(1.848)*
N = 121		
R ² =0.287, AdjustedR ² =0.243, F value=6.498(p=0.000)		

Horizontal embeddedness is supported as we expected at a significance level of 95%, whereas vertical embeddedness is not supported.¹⁾ The

result shows that the effect of embeddedness on subsidiary performance depends on the types of embeddedness or the characteristics of the network in which the subsidiary is embedded. And in vertical embeddedness, a high degree of interdependence and adaptation between the subsidiary and local allied firms and associations, is a critical factor contributing to subsidiary performance.

That vertical embeddedness is not supported is interpreted as follows. Firstly, as mentioned earlier, a vertically embedded subsidiary which depends on local suppliers and distributors with which to do business in a local market requires frequent contact with them because they are closely related to its daily work, including its daily operation, production, or logistics. Hence the advantages of vertical embeddedness enhancing exploitation activities come from achieving efficiency in the subsidiary's daily work. However, frequent contact with local suppliers and distributors requires a subsidiary to increase its management costs in keeping social relationships, such as daily communication costs and the costs of adjustment decision making, of every negotiation between the subsidiary and them, which might be greater than the advantages afforded by vertical embeddedness. Secondly, the ability to achieve operational efficiency may belong to the subsidiary's specific advantage that is transferred from the parent company, so that it is not substantially promoted by localization through vertical embeddedness. Thirdly, due to the investment purpose of 65.4%(79 subsidiaries out of 121) in our data of machinery, electrical · electronic products, and Chemical products industries can dilute the impact of vertical embeddedness. According to Korea Customs Service, since 2000, electronic microcircuits, cars, TV and radio transmitters are the top export products. Thus we can regard the related industries of these products as

1) We also analyze the effect of network embeddedness, including both vertical and horizontal embeddedness, on subsidiary performance. However it does not give any significant meaning at any level. This means that the impact of network embeddedness on performance differs according to the characteristics of the types of network embeddedness(Rowley et al. 2000; Andersson et al. 2001, 2002; Moran 2005).

competitive, and the main purpose of the subsidiaries operating in those industries is to search new innovations and new business opportunities or cooperate with Korean partners, rather than improve efficiency.

On the other hand, it is proved that horizontal embeddedness is an influential factor in the success of a subsidiary in a local market. Horizontal embeddedness helps a subsidiary combine old knowledge with distinctive knowledge gained from the horizontal network, so that it creates new local-specific knowledge based on the subsidiary's exploration activities. This horizontal embeddedness is an efficient means of creating local-specific knowledge, which becomes location-bound firm specific advantage(Rugman & Verbeke 1992, 2001, 2003). From this point of view, horizontal embeddedness is an effective solution not only to remove all obstacles for the exploitation of a subsidiary's specific advantages but also to gain competitive advantage in a local market.

Furthermore, a horizontally embedded subsidiary communicates interactively with local allied firms and associations; however it requires less contact than a vertically embedded subsidiary. Therefore, the advantages of horizontal embeddedness are not offset by management costs as in vertical embeddedness.

In conclusion, for a foreign operation, network embeddedness in local networks is an efficient means not only of acquiring local knowledge but also overcoming the liability of foreignness. Hence it helps a subsidiary develop its capability in a local market. However, the impact of horizontal embeddedness on performance is meaningful alone, not vertical embeddedness. This result is supported by previous research, such as Andersson et al.(2001, 2002), Lee et al.(2001), Moran(2005), and Rowley et al.(2000).²⁾

As for control variables, the fact that the firm-specific advantage(FSA) of a subsidiary is a dominant influence in subsidiary performance(Andersson et al. 2002; Barney 1991; Granovetter 1985; Teece

²⁾ Especially, the results of Rowley et al.(2000) and Moran(2005) demonstrate that exploration is suitable for high growth rate industry or innovation related affairs, and increases firm performance, supporting the results of this paper.

et al. 1997; Uzzi 1997) is reconfirmed at a significance level of 99%. Industry growth rate also has a meaningful impact on subsidiary performance. This is because high industry growth rate gives a subsidiary more business opportunities in a local market. However, the relations between age, investment, and ownership structure (wholly-owned subsidiary; WOS) and subsidiary performance are not demonstrated in this paper. In particular, the impact of WOS on subsidiary performance shows a negative sign that is insignificant though. This implies that a rapidly changing environment, such as the Korean market, provides the subsidiary with suitable conditions for creating a joint venture with a local partner so that the subsidiary can get local knowledge from the partner.

V. Conclusion

This paper examines the impact of vertical embeddedness and horizontal embeddedness on subsidiary performance in local networks. We assume that vertical embeddedness promotes subsidiary performance by increasing exploitation of old knowledge, whereas horizontal embeddedness enhances subsidiary performance by developing exploration of new business opportunities.

Using the data of 121 subsidiaries collected from a questionnaire survey, we find that horizontal embeddedness, not vertical embeddedness, increases subsidiary performance. This result demonstrates that the impact of embeddedness on subsidiary performance in local networks differs, depending on the types of embeddedness. The positive effect of horizontal embeddedness on subsidiary performance implies that horizontal embeddedness enables a subsidiary to combine its own specific advantage with distinctive knowledge obtained from local allied firms and associations into creating new knowledge. And the new knowledge becomes local-specific knowledge contributing to its performance.

Whereas, although we expect that vertical embeddedness accelerating exploitation contributes to a subsidiary's operational efficiency, the effect is not enough to offset management costs, and the effect is not supported at any significance levels.

This paper makes at least three contributions. First, the empirical results show that the importance of social relationships as a new source of competitive advantage in a local market contributes to increasing the importance of network theory and social relationships. To succeed in a local market, a subsidiary inevitably requires local relationships to develop its own specific advantage, which gives room for the development of network theory in the future. Second, this paper introduces a new classification of network embeddedness as vertical and horizontal embeddedness. So far, the types of networks(e.g., Inkpen & Tsang 2005) or network structure(e.g., Andersson et al. 2002) have been employed mainly to test the effect of network embeddedness on firm performance. Thus the new classification applied in this paper is meaningful for analyzing different effects, depending on the types of network embeddedness. Third, it suggests a successful local strategy to subsidiaries. Since exploration activities bring more benefits to a subsidiary than exploitation activities do, subsidiaries should focus on exploration in a rapidly changing environment like the Korean market.

There are some limitations that should be taken into account when analyzing this paper. First, it is about sample bias. About 65% of the sample belongs to the chemical, machinery and equipment, or electrical equipment industries, which are industries requiring a high degree of technology. Thus, this characteristic might have a greater effect on exploration in horizontal embeddedness, than exploitation. Second, the fact that this paper has been done for foreign subsidiaries in Korea leaves the problem of generalization in applying the results to all cases.

This paper suggests a future research agenda as follows. Firstly, it is to find out the moderate effect between network embeddedness and any other firm-specific advantages, such as the degree of technology advancement or reputation. Since we control subsidiary-specific

advantages to find the main effect between network embeddedness and performance, the possible moderating effect between subsidiary-specific advantages and network embeddedness is overlooked. A competitive subsidiary, with substantial firm-specific advantages, might be more apt not to embed in a local network so that those advantages may moderate the relation between network embeddedness and performance. Secondly, future research can investigate the relation between the degree of each network embeddedness and firm performance as shown in Uzzi(1997) that presents a curvilinear relation between the degree of network embeddedness and firm performance. On the contrary, the relation might be presented as inverted U shape as explained in Burt(1992) and Petersen & Rajan(1994).

References

- Ahuja, G., and Yayavaram. S. 2011. "Explaining Influence Rents: The Case for an Institutions-Based View of Strategy." *Organization Science* 22(6), 1631-1652.
- Andersson, U., and Forsgren, M. 1996. "Subsidiary Embeddedness and Control in the Multinational Corporation." *International Business Review* 5(5), 487-508.
- Andersson, U., and Forsgren, M. 2000. "In Search of Centre of Excellence: Network Embeddedness and Subsidiary Roles in Multinational Corporations." *Management International Review* 40(4), 329-350.
- Andersson, U., Forsgren, M., and Holm, U. 2001. "Subsidiary Embeddedness and Competence Development in MNCs: A Multi-level Analysis." *Organization Studies* 22(6), 1013-1034.
- Andersson, U., Forsgren, M., and Holm, U. 2002. "The Strategic Impact of External Networks - Subsidiary Performance and Competence Development in the Multinational Corporation." *Strategic Management Journal* 23, 979-996.
- Arranz, N., Fernandez De Arroyabe Arranz, M. and Fernandez De Arroyabe Fernandez, JC. 2018. "Network Embeddedness in Exploration and Exploitation of Joint R&D Projects: A Structural Approach." *British Journal of Management*, 1-17.
- Barney, J. 1991. "Firm Resources and Sustained Competitive Advantage." *Journal of Management* 17, 99-120.
- Baum, L., and Oliver, C. 1992. "Institutional Embeddedness and the Dynamics of Organizational Populations." *American Sociological Review* 57, 540-559.
- Burt, R. S. 1992. *Structural Hole* Harvard University Press, Cambridge:MA.
- Chang, Sea-Jin, van Witteloostuijn, Arjen and Lorraine Eden. 2010. "From the Editors: Common method variance in international business research." *Journal of International Business Studies* 41(2), 174-184.
- Cohen, W., and Levinthal, D. 1990. "Absorptive Capacity: A New Perspective on Learning and Innovation" *Administrative Science*

- Quarterly* 35, 128-152.
- Dicken, P. 1992. *Global Shift: The Internationalization of Economic Activity*, 2nd Edition. New York: Guilford Press.
- Dunning, J. H. 1980. "Toward an Eclectic Theory of International Production: Some Empirical Tests." *Journal of International Business Studies* 11(1), 9-31.
- Forsgren, M., and Pedersen, T. 1998. "Are There Any Centres of Excellence Among Foreign Owned Firms in Denmark?" In Birkinshaw, J. and Hood, N. *Multinational Corporate Evolution and Subsidiary Development*. London: McMillan.
- Granovetter, M. 1973. "The Strength of Weak Ties." *American Journal of Sociology* 78(6), 1360-1380.
- Granovetter, M. 1985. "Economic Action and Social Structure: The Problem of Embeddedness." *American Journal of Sociology* 91(3), 481-510.
- Granovetter, M. 1992. "Problems of Explanation in Economic Sociology." In N. Nohria & R. Eccles, eds. *Networks and Organizations*. Boston, Massachusetts: Harvard Business School Press, 25-56.
- Gulati, R., and Gargiulo, M. 1999. "Where do Interorganizational Networks Come From?" *American Journal of Sociology* 104(5), 1439-1493.
- Gulati, R., Nohria, N. and Zaheer, A. 2000. "Strategic Network." *Strategic Management Journal* 23(3), 203-215.
- Hägg, I., and Johanson, J. 1982. *Enterprise in Networks: New Perspective on Competitiveness*. Stockholm: SNS.
- Håkansson, H. 1989. *Corporate Technological Behavior: Co-operation and Networks*. Routledge: London.
- Halinen, Aino and Törnroos, Jan-Åke. 1998. "The Role of Embeddedness in the Evolution of Business Networks." *Scandinavian Journal of Management* 14(3), 187-205.
- Hennart, J. F. 1982. *A Theory of Multinational Enterprise* University of Michigan Press. Ann Arbor: MI.
- Hernandez, E., Sanders, W. G., and Tuschke, A. 2015. "Network Defense:

- Pruning, Grafting, and Closing to Prevent Leakage of Strategic Knowledge to Rivals." *Academy of Management Journal* 58(4), 1233-1260.
- Hymer, S. 1976. *The International Operations of National Firms: A Study of Direct Foreign Investment*. Cambridge, MA: MIT Press.
- Levinthal, D., and March, J. G. 1993. "The Myopia of Learning." *Strategic Management Journal* 14, 95-112.
- Inkpen, Andrew C., and Tsang, Eric W. K. 2005. "Social Capital, Networks, and Knowledge Transfer." *Academy of Management Review* 30(1), 146-165.
- Lee, C-W., Lee, K-M., and Pennings, J. M. 2001. "Internal Capabilities, External Networks, and Performance: A Study on Technology-Based Ventures." *Strategic Management Journal* 22(6), 615-640.
- Luo, Y. 2002. "Liabilities of Foreignness: Concepts, Constructs, and Consequences." *Journal of International Management* 8(3), 217-221.
- Luo, Y., and Mezias, J. 2002. "Liabilities of Foreignness: Concepts, Constructs, and Consequences." *Journal of International Management* 8(3), 217-221.
- March, J. G. 1991. "Exploration and Exploitation in Organizational Learning." *Organization Science* 2(1), 71-87.
- Mohr, J., and Spekman, R. 1994. "Characteristics of Partnership Success: Partnership Attributes, Communication Behavior and Conflict Resolution Techniques." *Strategic Management Journal* 15, 135-152.
- Moran, P. 2005. "Structural vs. Relational Embeddedness: Social Capital and Managerial Performance." *Strategic Management Journal* 26, 1129-1151.
- Nachum, L. 2003. "Liability of Foreignness in Global Competition? Financial Service Affiliates in the City of London." *Strategic Management Journal* 24, 1187-1208.
- Naude, P., and Buttle, F. 2000. "Assessing Relationship Quality." *Industrial Marketing Management* 29(4), 351-361.
- Petersen, M. A., and Rajan, R. G. 1994. "The Benefits of Lending

- Relationships: Evidence from Small Business Data." *Journal of Finance* 49, 3-37.
- Podsakoff, P. M., and Organ, D. W. 1986. "Self-reports in organizational research: Problems and prospects." *Journal of Management* 12(4), 531 - 544.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J., and Podsakoff, N. P. 2003. "Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies." *Journal of Applied Psychology* 88(5), 879-903
- Polanyi, K. 1944. *The Great Transformation*. New York: Holt, Rinehart.
- Powell, W. W. 1990. "Neither Market nor Hierarchy: Network Forms of Organization." *Research in Organizational Behavior* 12, 295-336.
- Rothaermel, F., and Deeds, D. 2004. "Exploration and Exploitation Alliances in Biotechnology: A System of New Product Development." *Strategic Management Journal* 25(3), 201-221.
- Rowley, T. J., Behrens, D., and Krackhardt, D. 2000. "Redundant Governance Structures: An Analysis of Structural and Relational Embeddedness in the Steel and Semiconductor Industries." *Strategic Management Journal* 21(3), 369-386.
- Rugman, A. M., and Verbeke, A. 1992. "A Note on the Transnational Solution and the Transaction Cost Theory of Multinational Strategic Management." *Journal of International Business Studies* 23(4), 761 - 771.
- Rugman, A. M., and Verbeke, A. 2001. "Subsidiary-Specific Advantages in Multinational Enterprises." *Strategic Management Journal* 22(5), 237-250.
- Rugman, A. M., and Verbeke, A. 2003. "Extending the Theory of the Multinational Enterprise: Internalization and Strategic Management Perspectives." *Journal of International Business Studies* 34(2), 125-137.
- Schumpeter, J. A. 1950. *Capitalism, Socialism, and Democracy*, 2nd edition. New York: Harper and Brothers.
- Teece, D. J., Pisano, G., and Shuen, A. 1997. "Dynamic Capabilities of and Strategic Management." *Strategic Management Journal* 18(7),

509-533.

- Tsai, W. 2001. "Knowledge Transfer in Intra-Organizational Networks: Effects of Network Position and Absorptive Capacity on Business Unit Innovation and Performance." *Academy of Management Journal* 44, 996-1004.
- Uzzi, B. 1996. "The Sources and Consequences of Embeddedness for the Economic Performance of Organizations: The Network Effect." *American Sociological Review* 61, 674-698.
- Uzzi, B. 1997. "Social Structure and Competition in Interfirm Networks: The Paradox of Embeddedness." *Administrative Science Quarterly* 42, 35-67.
- Uzzi, B., and Gillespie, J. 2002. "Knowledge Spillover in Corporate Financing Networks: Embeddedness and the Firm's Debt Performance." *Strategic Management Journal* 23, 595 - 618.
- Zaheer, S. 1995. "Overcoming the Liabilities of Foreignness." *Academy of Management Journal* 38(2), 341-363.
- Zaheer, S., and Mosakowski, E. 1997. "The Dynamics of Liabilities of Foreignness: A Global Study of Firms' Survival in Financial Services." *Strategic Management Journal* 18(6), 439-464.
- Zaheer, S. 2002. "The Liability of Foreignness, Redux: A Commentary." *Journal of International Management* 8, 351-358.
- Zimmerman, M. A. 2002. "Beyond Survival: Achieving New Venture Growth by Building Legitimacy." *Academy of Management Review* 27(3), 414-431.
- Zukin, S., and DiMaggio, P. J. 1990. *Structures of Capital: The Social Organization of the Economy*. Cambridge: Cambridge University Press.

국문요약

한국내 해외자회사의 수평·수직 네트워크 배태성이 성과에 미치는 영향

박영렬 ■ 연세대학교

손정민 ■ 인제대학교

본 연구는 한국에서 활동하고 있는 해외자회사를 대상으로 이들이 국내에서 생성하게 되는 다양한 네트워크 배태성이 성과에 어떠한 영향을 미치는지에 대해 살펴보았다. 특히, 현지에서 생성할 수 있는 다양한 네트워크 중에서 공급자 및 판매자들과의 네트워크 배태성은 수직적 배태성이라고 명하고, 산업내 경쟁기업 및 협회 등과의 네트워크 배태성은 수평적 배태성이라 하여 각각의 유형이 해외 자회사의 성과에 미치는 영향을 살펴보았다.

한국에서 활동하고 있는 121개의 해외자회사를 대상으로 분석한 결과, 수평적 네트워크 배태성만이 해외 자회사 성과에 긍정적인 영향을 미치고 수직적 네트워크 배태성은 가설과 달리 유의적 결과를 도출하지 못하였다.

주제어: 네트워크 배태성, 자회사 성과, 활용, 탐색

