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Competitive embeddedness: The impact of competitive relations among a firm's current alliance partners on its new alliance formations

Gunno Park [a], Marco JinHwan Kim [b], Jina Kang [c,*]

[a] Samsung SDS, 707-19 Yeoksam2-dong, Gangnam-gu, Seoul 135-918, South Korea
[b] Technology Management, Economics and Policy Program, Seoul National University, 1 Gwanak-ro, Gwanak-gu, Seoul 151-744, South Korea
[c] Technology Management, Economics and Policy Program, and Department of Industrial Engineering, Seoul National University, 1 Gwanak-ro, Gwanak-gu, Seoul 151-744, South Korea

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ABSTRACT

Over the last decades, alliance portfolio has been an important research area within the management and international business fields. Since engaging in multiple alliances provides many advantages to firms, the extant literature rather highlights the positive side of alliance portfolios. But, at the same time, focal firms of alliance portfolios sometimes suffer from competitive relations among their partners. By applying a competitive embeddedness lens, we examine the influence of competitive relations among partners within an alliance portfolio on the focal firm's alliance formations. Also, we examine the role of the focal firm's resources which moderate the relation between competition among its partners and its alliance formations. We investigated 2539 cases of global technology alliances in the biopharmaceutical industry from 2002 to 2006 through negative binomial regression. Our findings indicate that a holistic approach toward alliance portfolios to prevent competition among partners is significant for sustainable alliance strategies. Moreover, we suggest that firm resources which attract partners also lessen the impact of competition among alliances.

1. Introduction

As a result of firms' simultaneous engagements in a number of individual alliances, firms run their own alliance portfolios (Wassmer, 2010). While individual alliance research is focused on accessing valuable resource (Chung, Singh, & Lee, 2000; Das & Teng, 2000; Eisenhardt & Schoonhoven, 1996; Lavie, 2006), learning (Inkpen, 2000; Kogut, 1988), and reducing transaction cost and uncertainty (Kogut, 1988; Kogut, 1991) through individual partners, alliance portfolio research puts the focus on the configuration and the management of the whole portfolio. This point of view leads to a holistic approach which takes the whole portfolio into account and stops treating individual alliances as independent transactions (Bamford & Ernst, 2002; Duysters, de Man, & Wilderman, 1999; Hoffmann, 2005; Parise & Casher, 2003). Alliance portfolios have firms take advantage of synergies and super-additivity among their partners or confront conflict and sub-additivity among their partners (Parise & Casher, 2003; Vassolo, Anand, & Folta, 2004). This implies that monitoring and coordination of focal firms' partners are significant in alliance portfolio strategy so that focal firms can fully capture the value creation from the synergy in their portfolios and avoid conflict among their partners which undermines such synergy.

Especially, we need to pay more attention to the conflict among a focal firm's partners in an alliance portfolio. In previous literature, it is assumed that alliance portfolios are predominantly beneficial to focal firms. For instance, many researchers suggest that growing alliance portfolios contribute to focal firms' performance (Ahuja, 2000a; Baum, Calabrese, & Silverman, 2000; Deeds & Hill, 1996; Gulati, 1999; Shan, Walker, & Kogut, 1994; Stuart, 2000; Stuart, Hoang, & Hybels, 1999). Therefore, focusing on conflict among the focal firm's partners and the consequential deterioration of the focal firms' performance can allow us deeper insights beyond the past trend of research in alliance portfolios. Besides, the conflict suggests that it is crucial for focal firms to strategically manage and configure their alliance portfolios, not only for better performance, but also for the long term viability of their portfolios.

Conflict among alliance partners can arise from their competitive relations. Even though they are parts of the same alliance portfolio of a focal firm, they might originally be competitors in the

* Corresponding author. Tel.: +82 2 880 5109.
E-mail addresses: gunno_park@hanmail.net (G. Park), marco@snu.ac.kr (M.J. Kim), profkang@snu.ac.kr (J. Kang).

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same market or industry. In this paper, we study the competitive relations in alliance portfolios in terms of embeddedness. The extant research in embeddedness suggests that inter-firm alliances do not occur in isolation, but rather under the influence of existing inter-firm networks that the firms are involved in (Granovetter, 1985; Gulati, 1995a; Gulati & Gargiulo, 1999). Especially, previous literature discusses mainly how structural and relational embeddedness affect alliance formations. Adding to previous literature, the objective of this study is to conceptualize competitive relations among a focal firm's partners as competitive embeddedness in an alliance portfolio and to examine its influence on the focal firm's subsequent alliance formations. Also, we investigate the moderating role of the focal firms' resources.

Following these objectives, our paper presents two key findings: First, competitive relations among a focal firm's partners in an alliance portfolio negatively influences the rate of the focal firm's alliance formations. We operationalize competitive relations in an alliance portfolio in terms of breadth and depth and examine empirically that both dimensions of competitive relations negatively influence the focal firm's new alliance formations. Second, valuable resources of the focal firm which attract partners help negating the negative influence of competitive relations. Sometimes, focal firms are not able to transform their alliance portfolios promptly or directly because of essential partners, contract period, etc. We suggest an indirect way of managing competitive relations in an alliance portfolio by utilizing the moderating role of the focal firm's resources, in this study we consider technological resources, on the relationship between competitive relations and new alliance formations.

In this research, we make four contributions to the literature focusing on alliance portfolios and international business. First, through a holistic approach toward alliance portfolios, we conceptualize competitive relations among a focal firm's partners in an alliance portfolio as competitive embeddedness and examine its negative influence on the focal firm's alliance formations. This paper is wary of the positively biased view over growing alliance portfolios in previous literature and empirically supports existing research (Hoffmann, 2005; Parise & Casher, 2003; Vassolo et al., 2004) which highlights the negative influence of conflicts among partners on focal firms. Second, we enrich the research on the influence of embeddedness on alliance formations in two different ways. We suggest another type of embeddedness (i.e. competitive embeddedness) which affects alliance formations in an alliance portfolio in other ways than structural and relational embeddedness. At the same time, the extant research on the relationship between competitive embeddedness and alliance formations is focused on direct rivalry or dyadic networks (Gimeno, 2004; Trapido, 2007). We extend the unit of analysis of competitive embeddedness to multi-actor networks, i.e. alliance portfolios. Third, we exemplify how network relationships affect firm performance in an international context. By analyzing international alliances between US biotechnology firms and multinational pharmaceutical companies, we exemplify previous conceptual literature (Benito & Welch, 1994; Coviello & Munro, 1997; Sharma, 1993) which specifically suggests that existing network relationships might inhibit new market development and verify this suggestion empirically. Fourth, we go beyond the academic point of view and contribute to managerial practices by suggesting how to cope with competitive embeddedness in an alliance portfolio.

The remainder of the paper is organized as follows: First, we develop the theoretical background of why a holistic approach and conflict management are significant for alliance portfolios and how we can understand competitive relations among alliance partners through the lens of competitive embeddedness. We develop hypotheses which link competitive relations, alliance formations and the focal firms' resources. Second, using negative binomial regression, we then test our hypotheses using data on 2539 global technology alliance cases in the biopharmaceutical industry from 2002 to 2006. Finally, we present our empirical results and conclude with a discussion of implications, limitations, and directions of future research.

2. Theoretical background and hypotheses

2.1. A holistic approach and conflict management in alliance portfolios

Alliance portfolio management is an important topic in international business literature. Lichtenthaler and Lichtenthaler (2004) suggest firms to manage complexity in the environment of international multi-alliances. To address the complexity, a number of studies stress the importance of a holistic approach toward alliance portfolios. Duysters et al. (1999) suggest that firms should select alliance partners based on portfolio fit by analyzing their portfolios continuously. Parise and Casher (2003) and Hoffmann (2005) suggest that firms should exploit synergies and, at the same time, avoid conflicts across the whole portfolio. More specifically, firms should assess trust and knowledge among their partners, monitor the influence of individual alliances in the portfolio on each other and on overall performance, and change portfolio configuration over time (Parise & Casher, 2003). Hoffmann (2007) also suggests that firms should build alliance management systems by monitoring and coordinating their portfolios continuously. In sum, firms should maximize benefits and minimize conflicts in their alliance portfolios through holistic management.

Especially, firms should pay attention to the conflict within alliance portfolios. While it is usually seen as beneficial for firms to build an alliance portfolios because they can benefit from knowledge sharing, cooperation and synergies among their partners, previous literature suggests that building alliance portfolio sometimes happens to be harmful due to conflicts among focal firms' partners. Specifically, Lichtenthaler and Lichtenthaler (2004) suggest that every single alliance may have negative influences on other alliances due to their negative synergies in the complex international alliance environment. Parise and Casher (2003) suggest that constraining interdependencies among focal firms' partners lead to conflicts in an alliance portfolio. These constraining interdependencies occur when focal firms' alliance partners are strong rivals with one another in an industry and promote competing technologies. These interdependencies can bring significantly negative impact on focal firms' alliance performance. Vassolo et al. (2004) build on portfolio theory (Markowitz, 1959) in finance and suggest that redundant investments induce conflicts in an alliance portfolio. According to portfolio theory, the more investments in a portfolio are correlated, the lesser is the value of the portfolio. To sum up, the overlap of alliance partners leads to less return on investments and, even worse, different partners within an alliance portfolio hold each other in check and damage the value of the whole alliance portfolio. In other words, conflicts among a focal firm's partners prevent the focal firm of an alliance portfolio from obtaining benefits of the portfolio and negatively influence the focal firm's performance.

When firms build up their immediate social surrounding, i.e. their alliance portfolios, conflicts between their linked firms (partners) might also build up and an unintended consequence affects the focal firm. The influence of conflicts within an alliance portfolio can be investigated using the concept of embeddedness since one of the basic assumptions in embeddedness study is that an actor is affected by his social surroundings (Echols & Tsai, 2005; Granovetter, 1985). In the next section, we review existing