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A comparative perspective on external technology sourcing modalities: The role of synergies



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ABSTRACT

This paper assesses the impact on innovative performance of alternative external sourcing strategies. In particular, the study under discussion compared external sourcing strategies based on specialization to those based on integrating various sourcing modalities (e.g., alliances and M&As). Survey data from three waves of the Community Innovation Survey (CIS) in the Netherlands were used to investigate the implications of these sourcing strategies for innovative performance. The findings indicate that synergies exist among external sourcing modalities: Integrating different external sourcing modes is more effective than specializing in a single mode, especially when the specialization is focused on M&As. Among the specialized strategies, focusing on the use of strategic alliances leads to higher levels of innovative performance than relying exclusively on M&As.

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Introduction

Innovation is a strategic priority and a key element separating successful from unsuccessful firms (Andrew et al., 2007). Innovating, however, has become progressively more complex in an environment characterized by rapid technological advancements and shorter product life cycles (European Commission, 1995; OECD, 1997). In response to these challenges, firms have increasingly turned to external sources of innovation to complement their internal R&D efforts (Tsai and Wang, 2007). This external acquisition has been shown to contribute to innovative performance (Tsai et al., 2011), and the prevalence of an “open innovation” perspective, in which companies are seen as entities with porous boundaries, is largely acknowledged by both the academic and the business community (Chesbrough, 2003).

Companies can adopt different modes of external sourcing, among the most prominent being mergers and acquisitions (M&As) and strategic alliances (abbreviated in this paper as SAs). With global investments valued at \$2.56 trillion in 2006 (WilmerHale, 2006), M&As represent a strategic option that has considerable consequences for economic activity at both the firm level and the national level. In a similar vein, the remarkable increase in the number of SAs since the 1980s seems to confirm the growing importance of inter-firm links, especially in technology-intensive sectors (Hagedoorn, 2002; De Man and Duysters, 2005).

The central question addressed in this paper is whether there is a systematic difference in the innovative performance of firms that opt for different external sourcing strategies (i.e., M&As, SAs, or both). In ranking the success of different sourcing modalities with respect to innovative performance, we deepen our current understanding of how companies can enhance performance. Previous literature has mainly assessed the effect on innovation of a single type of sourcing strategy, either alliances (e.g., Baum et al., 2000) or M&As (e.g., Ahuja and Katila, 2001). This lack of comparative analysis means there is limited guidance in this area in terms of managerial practice (De Man and Duysters, 2005). Only a few studies (e.g., Keil et al., 2008; Rothaermel and Hess, 2007; Schildt et al., 2005) have compared the impact on innovation of distinct external sourcing strategies. Existing comparative literature, however, has paid little attention to the effects on innovation performance that result from using different external sourcing strategies in combination. Put another way, researchers have mainly considered the complementarities among external sourcing strategies and internal R&D efforts (e.g., Wagner, 2011), but the question of whether potential synergies exist among SAs and M&As has been left virtually unaddressed.

The focus of the present study, therefore, is on uncovering the potential synergies arising from the interaction of M&A and SA activities and on considering their performance consequences. In particular, we assess the innovation implications of specializing in alliances or M&As only, versus those of relying on an integrated approach combining alliances and M&As. To this end, we analyzed the innovative performance of 2862 Dutch firms from a broad spectrum of manufacturing industries (from 1994 to 2000).

The present research contributes to the literature. In particular, the study joins an expanding stream of research that adopts a comparative perspective to external sourcing strategies (e.g., Keil et al., 2008; Rothaermel and Hess, 2007; Schildt et al., 2005; Belderbos et al., 2012). The paper advances our current understanding by adopting a portfolio perspective, highlighting the role of synergies, and discussing the impact of integrating various sourcing modes.

The paper is organized as follows. In Section “Theoretical background and hypotheses”, we develop the hypotheses and predict the effects of various external sourcing strategies on innovation. In Section “Methods”, we present the methods of our research model. The results are reported in Section “Results”. And Section “Discussion and conclusions” includes the discussion and conclusions, together with recommendations for further research.

Theoretical background and hypotheses

Companies have a wide variety of options for sourcing external technology, and these can be differentiated by the degree of integration (Chiesa and Manzini, 1998). A considerable stream of literature has argued that, in considering external sources, companies essentially choose between

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