



ELSEVIER

Contents lists available at ScienceDirect

Research Policy

journal homepage: www.elsevier.com/locate/respol

Post-acquisition integrative versus independent innovation: A story of dueling success factors

Joshua B. Sears*

Jerry S. Rawls College of Business Texas Tech University 703 Flint Avenue, Box 42101, Lubbock, TX, 79409, United States

ARTICLE INFO

Keywords:

Innovation
Technological acquisitions
Technological overlap
Absorptive capacity
Selective intervention

ABSTRACT

Technological acquisitions have become a popular complement to internal innovation in order to overcome the time-compression diseconomies of internal innovation. As such, acquisition success greatly depends on the expeditious leveraging of target knowledge. Confounding our understanding of leveraging target knowledge is that targets play two distinct innovative roles post-acquisition: conduct innovative activities in conjunction with acquirers (integrative innovation) and continue innovative activities independent of acquirers (independent innovation). To understand how factors differentially affect these two types of innovation, I connect two disparate concepts: relative absorptive capacity and selective intervention. I develop theory and find evidence that while relative absorptive capacity creates the communication capabilities that accelerate integrative innovation, it simultaneously deteriorates the information asymmetries between targets and acquirers leading to greater opportunities for acquirer intervention into target innovative activities that delay independent innovation.

1. Introduction

The acquisitions of small, technology-based firms have become a popular complement to internal innovation as technological change has become both rapid and frequent (Sarkar et al., 2006; Marco, 2007). The primary factor motivating acquisitions of small, technology-based firms is not the inability to internally innovate but rather the need to overcome the time compression diseconomies of internal innovation (Dierickx and Cool, 1989). For example, Cisco prefers to acquire technology through acquisition rather than through internal development when the development time exceeds six months (Aguilera and Dencker, 2004). Additionally, minimizing the time elapsed until the initial post-acquisition innovation is crucial to success as the initial innovation marks a new firm-specific innovation paradigm driving successive innovations (Puranam et al., 2006)¹. Unfortunately, evidence suggests a decline in target innovative productivity following an acquisition (Kapoor and Lim, 2007).

Confounding our understanding of the success factors for leveraging the target's knowledge is that many acquirers expect the target to undertake distinct dual innovative roles within the post-acquisition firm (Puranam, 2001). First, acquirers expect the target to undertake innovative activity in conjunction with the acquirer leading to what I term 'integrative innovation' (Almeida et al., 2002). At the same time,

acquirers expect the target to continue independent innovative activity leading to what I term 'independent innovation' (Puranam et al., 2009). While these two types of innovations are distinct, acquirers are not limited to choosing one over the other. For example Mario Mazzola, Chief Development Officer at Cisco, stated, '... we would encourage them (the target) to continue development independently, but co-operate and communicate with our R&D/manufacturing people' (Puranam, 2001: 141).

The two distinct types of innovation would not be problematic except that frequent interactions and communication benefit integrative innovations while autonomy and delegation of control benefit independent innovations. With an initial attempt to address this issue, Puranam and Srikanth (2007) differentiated between target knowledge-workers continuing to innovate post-acquisition and the post-acquisition firm utilizing target pre-acquisition knowledge in post-acquisition innovations; as such, the study focused solely on target pre-acquisition knowledge. To build upon this work, I built two novel measures that incorporate both acquirer pre-acquisition knowledge and target pre-acquisition knowledge utilizing patents. That is, I differentiated between post-acquisition patents built solely off the pre-acquisition knowledge of the target (independent innovations) and post-acquisition patents built off the pre-acquisition knowledge of both the target and the acquirer (integrative innovations). As such, this study addresses the

* Corresponding author.

E-mail address: joshua.sears@ttu.edu.¹ Puranam et al. (2006) utilized the concept of technological paradigm at the firm level rather than at the industry level as Dosi (1982) originally defined it. A new firm-level technological paradigm refers to a new paradigm within the post-acquisition firm's innovative routines.<https://doi.org/10.1016/j.respol.2018.06.003>Received 23 June 2017; Received in revised form 18 May 2018; Accepted 5 June 2018
0048-7333/ © 2018 Elsevier B.V. All rights reserved.

following research question: How do the communication facilitating characteristics of technological acquisitions differentially affect the speed to the initial post-acquisition integrative innovation and the initial post-acquisition independent innovation?

In this paper, I submit that relative absorptive capacity expedites integrative innovation while simultaneously delaying independent innovation due to the increasing occurrence of acquirer intervention into target innovative activities. To test the theory, I utilized the [Dyer and Singh \(1998\)](#) conceptualization of partner-specific absorptive capacity which is a function of both overlapping knowledge and the development of knowledge-sharing routines. To address the overlapping knowledge portion of relative absorptive capacity ([Dyer and Singh, 1998](#)), I utilize the construct technological overlap. To address the development of the knowledge-sharing routines portion of relative absorptive capacity ([Dyer and Singh, 1998](#)), I utilize the constructs geographic distance, crossing national borders, and language difference since they provide observable measures of characteristics that impede the creation of organizational routines, which are defined as ‘multi-actor, interlocking, reciprocally-triggered sequences of actions’ ([Cohen and Bacdayan, 1994: 554](#)). Further, I submit that technological overlap will attenuate both the delaying effects that the distance measures have on the duration to the initial integrative innovation and the expediting effects that the distance measures have on the duration to the initial independent innovation.

This study contributes to the technological acquisitions literature and to the broader relative absorptive capacity literature. First, this study is the first to empirically differentiate between integrative innovation and independent innovation through the creation of two novel measures. The study demonstrates that the success factors for integrative innovation can be detrimental to independent innovation. Further, the study provides empirical evidence that technological overlap can attenuate the negative effects that crossing national borders and language difference have on the creation of knowledge-sharing routines. Second, the study theoretically advances our understanding of relative absorptive capacity by introducing the idea that relative absorptive capacity can lead to selective intervention, which answers the call for further studies on selective intervention by [Williamson \(2010\)](#). The study also possesses great managerial implications as managers must consider how they plan to utilize the target’s knowledge—integrative innovation, independent innovation, or both—when deciding whether to acquire a potential target. Further, this study contributes to the severely lacking literature on the effects of language difference ([Welch and Welch, 2008](#)). Finally, this study contributes to the minimal but vital prior research on the timing of post-acquisition innovation in technological acquisitions ([Puranam et al., 2006](#)).

2. Integrative innovation versus independent innovation

While acquirers seek target knowledge workers to play dual innovative roles post-acquisition, these dual innovative roles possess dueling success factors. On the one hand, integrative innovations rely heavily on knowledge exchange within complex task interdependent activities encompassing both target and acquirer knowledge workers ([Thompson, 1967](#)). As such, absorptive capacity advantages integrative innovation by facilitating the assimilation and exploitation of the target’s knowledge and capabilities with the those of the acquirer ([Cohen and Levinthal, 1990](#)). On the other hand, independent innovations rely heavily on maintaining the status quo within the target to maintain the pre-acquisition innovative productivity of the target knowledge workers ([Puranam et al., 2006](#); [Puranam and Srikanth, 2007](#)). As such, delegating the decision rights to the target advantages independent innovation since the target knows its capabilities best and already possesses established innovative routines ([Miles et al., 1997](#); [Nickerson and Zenger, 2004](#)).

To address these dueling demands of greater communication and autonomy, acquirer management attempt selective intervention.

[Williamson \(2010\)](#) explained selective intervention as, ‘suppose that two successive stages of production are combined with the understanding that (1) the acquired stage will operate in the same autonomous manner post-acquisition as in the pre-acquisition status (by replication) except as (2) the acquiring stage intervenes selectively, always but only, when expected net gains can be ascribed to coordinated adaptations. In that event, the combined firm can never do worse (by replication) and will sometimes do better (by selective intervention).’ The problem is that selective intervention is not feasible as it inevitably leads to excessive, non-value creating intervention (e.g., [Graebner, 2009](#); [Williamson, 2010](#); [Foss, 2003](#); [Williamson, 1988, 1985](#)). [Foss \(2003: 342\)](#) noted the following about managers’ tendencies to excessively intervene, ‘...robust findings in experimental psychology show the presence of a systematic overconfidence bias in judgment; that is, people tend to trust their own judgments more than is ‘objectively’ warranted. Managers are not exceptions to this bias, perhaps quite the contrary. The presence of the overconfidence bias in the judgments that underlie managerial decision making is likely to aggravate the problem of selective intervention, because it produces additional meddling in subordinates’ decisions.’

Excessive intervention poses two distinct problems that negatively affect the target knowledge workers continuing their pre-acquisition innovative productivity post-acquisition. First, intervening after delegating authority can harm intrinsic motivation of the target knowledge workers ([Foss et al., 2006](#)). The resulting demotivation of the target employees has been shown to significantly decrease their technological productivity post-acquisition ([Paruchuri et al., 2006](#)) and often leads to turnover ([Krishnan et al., 1997](#)). Second, excessive intervention appropriates the time and attention of the target knowledge workers away from their independent innovative activities.

In the next section, I focus on factors that affect the development of absorptive capacity and thus, affect knowledge exchange and the potential for excessive intervention. Specifically, I incorporate the [Dyer and Singh \(1998: 665\)](#) partner-specific absorptive capacity, or relative absorptive capacity ([Lane and Lubatkin, 1998](#)), which ‘is a function of (1) the extent to which partners have developed overlapping knowledge bases and (2) the extent to which partners have developed interaction routines that maximize the frequency and intensity of sociotechnical interactions.’

2.1. Technological overlap

Overlapping knowledge has been empirically measured as technological overlap (e.g., [Ahuja and Katila, 2001](#); [Sears and Hoetker, 2014](#)). Technological overlap indicates common vocabulary, conceptual knowledge, and experience that drives efficient communication ([Grant, 1996a](#)) and enhances the capability of the post-acquisition firm to expeditiously establish the knowledge-sharing routines necessary for integrative innovations. Common knowledge has been shown to be a prerequisite for both communication ([Demsetz, 1988](#); [Grant, 1996b](#)) and intra-firm knowledge absorption ([Lane et al., 2001](#)) and has been shown to increase inter-firm learning ([Lane and Lubatkin, 1998](#)). Further, a lack of common knowledge can exceedingly hinder intra-organizational knowledge transfer ([Szulanski, 1996](#)). On the other hand, greater technological overlap increases the likelihood of the acquirer discovering serendipitous opportunities to intervene with, or rather interject itself into, the target’s innovative activities as the acquirer believes it can add value ([Graebner, 2004](#)). As such, technological overlap should expedite integrative innovations and delay independent innovations.

2.2. Geographic distance

There has been a plethora of research that has shown that knowledge flows dissipate with geographic distance (e.g., [Cameron, 1996](#); [Jaffe et al., 1993](#)). While recent technological advancements in

Download English Version:

<https://daneshyari.com/en/article/10226826>

Download Persian Version:

<https://daneshyari.com/article/10226826>

[Daneshyari.com](https://daneshyari.com)