

ACHIEVING ALLIANCE INNOVATION VIA ALLIANCE LEARNING: AN EMPIRICAL STUDY

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Published 5 July 2013

Firms increasingly enter into business alliances in an effort to manage the innovation process and with a view to achieving better outcomes. The process therefore likely benefits from greater alliance learning, which can help transform alliance creativity and absorptive capacity into innovative outputs and thus a sustainable advantage for the alliance firms. Survey data collected from 389 Australian firms confirm that alliance creativity and absorptive capacity affect alliance innovation through the mediating role of alliance learning. In contrast, a test of an alternative moderating perspective reveals that alliance learning does not play a significant moderating role in these relationships. Although this study uses a cross-sectional, key-informant design, it offers important insights for research and practice.

Keywords: Alliance creativity; absorptive capacity; alliance innovation; alliance learning.

Introduction

Business alliances play increasingly important roles in fostering innovation and enhancing marketplace performance (Kale and Singh, 2007; Lichtenthaler, 2009). However, simply forming such ‘ongoing, formal, business relationship[s] between two or more independent organisations to achieve common goals’ (Sheth and Parvatiyar, 1992, p. 72) cannot guarantee success. Extant literature has established that alliance innovation and success depend on the alliance firms’ ability to manage related key areas (Salge *et al.*, 2012) including alliance creativity

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(Bharadwaj and Menon, 2000; Gudergan *et al.*, 2002) and absorptive capacity (Cohen and Levinthal, 1990; Ireland *et al.*, 2002; Jansen *et al.*, 2005; Lane *et al.*, 2006; Lichtenthaler, 2009; Zollo *et al.*, 2002). The realisation of alliance creativity and absorptive capacity emphasises the salient role of alliance learning, yet the latter component has received limited attention in business alliance research. Alliance learning refers to the extent to which an alliance firm acquires, interprets and leverages know-how within the business alliance partnership (e.g., Araujo, 1998; Kandemir *et al.*, 2006; Seely-Brown and Duguid, 1991; Snyder, 1997). Alliance firms must learn to work together and to appropriate value from their alliance learning (Carlson *et al.*, 2011; Inkpen, 2000; Kandemir *et al.*, 2006); for example, alliance learning enables managers to exploit new ideas and new knowledge generated from the alliance partnerships to foster alliance innovation. Yet despite the important role of alliance learning in connecting alliance creativity and absorptive capacity to alliance innovation, extant research largely ignores this factor.

Drawing on contingency theory (Fry and Smith, 1987; Venkatraman, 1989), we propose two perspectives regarding the role of alliance learning. First, a moderating perspective suggests that alliance learning determines the strength of the effects of alliance creativity and absorptive capacity on alliance innovation. Second, a mediating perspective suggests that alliance creativity and absorptive capacity affect alliance innovation through their effects on alliance learning. By examining both perspectives simultaneously, we gain deeper insight into how alliance creativity and absorptive capacity transform into alliance innovation through the influence of alliance learning. For example, if a mediating role of alliance learning exists, whereas a moderating role does not, alliance firms must realise that alliance creativity and absorptive capacity are not inherently valuable; though their potential value can be realised through alliance learning. Figure 1 presents the theoretical framework.

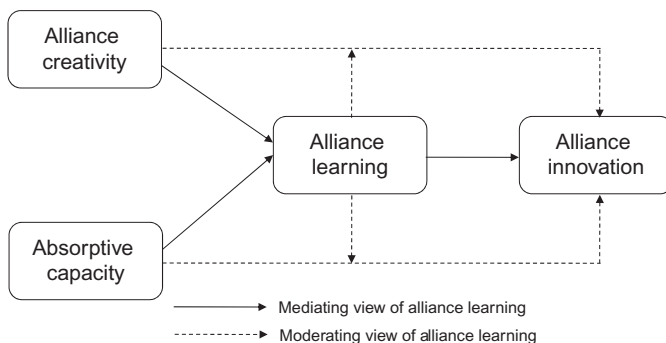


Fig. 1. Theoretical framework.

Theoretical Background and Hypotheses

The theory of contingency (Fry and Smith, 1987; Venkatraman, 1989) offers a basis for the hypothesised relationships in Fig. 1. The cornerstone of contingency theory is strategic fit, an essential feature for constructing and testing any conceptual model. Fry and Smith (1987) argue that firm effectiveness depends on the macro-level fit of the relationships between the external environment and the organisational sub-system, as well as the micro-level fit within the relationships of the sub-system elements (see also McKee *et al.*, 1989). For this study, we measure micro-level fit in the congruence among alliance innovation, alliance creativity, absorptive capacity and alliance learning.

Alliance innovation

Researchers suggest the need to develop a more thorough understanding of the dynamics that contribute to the processes of acquiring and leveraging resources in alliances (Hitt *et al.*, 2000). The interest in linking alliances and innovation continues to be strong, for both theoretical and practical reasons. Theoretically, there is much that remains to be understood about the ‘black box’ that defines the link between alliance functions and alliance success. Practically, such an understanding has the potential to increase alliance success rates (e.g., Kale and Singh, 2007; Levinson, 2010). In this study, we define alliance innovation as novel solutions with social or economic value, derived from the alliance partnership.

Increasing evidence in alliance innovation research has confirmed Powell *et al.* (1996) contentions that the locus of innovation appears in networks of firms rather than a single firm and that the organisation can become a center for learning and knowledge accumulation. Recent studies thus have emphasised the needs for external connections to foster innovation (Levinson, 2010; Olander and Hurmelinna-Laukkanen, 2010), as well as for a dedicated alliance function that can coordinate and oversee overall alliance activity (Salge *et al.*, 2012) and thereby generate alliance success (Kale and Singh, 2007). Although partner interactions in a collaborative effort may mobilise resources for innovation creation, more recent evidence shows that the most successful alliances are those that have committed managers who are responsible for overseeing the firms’ alliance activity (Dyer *et al.*, 2001; Kale and Singh, 2007). Furthermore, practitioner feedback regarding alterations to existing business models suggests the need for additional research to understand alliance management, the building blocks of alliance innovation and especially the effects of alliance learning so that businesses can devise approaches to foster alliance innovation and success (Dew and Hearn, 2009; Heimeriks and Duysters, 2007; Inkpen and Pien, 2006; Levinson, 2010).

Alliance creativity

Creativity has long been a core concept of multiple disciplines, ranging from arts to psychology to management and marketing (e.g., Ford, 1996; McAuley and Fillis, 2000). It may occur at any organisational level and usually commences with the individual where it consists of domain-relevant skills, creativity-relevant skills and task motivation (Amabile, 1983). These central components then can be developed through formal and informal learning (Amabile, 1983) which is integral for guiding creative thought and forming potential cognitive responses to various situations (Newell and Simon, 1972).

At more complex levels, some researchers suggest that creativity's importance arises from its link to innovation (Amabile, 1988; Paolillo and Brown, 1978). For example, at the organisational level Amabile (1988) suggests that three critical components influence organisational creativity and innovation: motivation to innovate, as communicated by an exploration-oriented culture that challenges staff; resources in the task domain, such as professional knowledge and production resources; and skills in innovation management, which refer to effective management in the organisation. Amabile (1988) further suggests that the components of creativity influence innovation at the organisational level but also can be extended to different structures, such as inter-organisational arrangements.

We define alliance creativity as the integration of social and contextual influences that generates unique ideas and solutions in an alliance partnership context. Aligned with prior evidence that creativity is explicitly linked to innovation, we posit that alliance creativity plays a central role in generating alliance innovation.

H1: *Alliance creativity has a positive effect on alliance innovation.*

Because creativity provides a source of new ideas, whereas innovation refers to the successful implementation of those new ideas (Amabile and Conti, 1996; Powell *et al.*, 1996) it is logical to assert that creativity is critical to innovation at any level (Amabile, 1988) but is not innovation in itself (Wycoff and Snead, 1999). Rather, creativity is part of a broader model of innovation (Amabile, 1988; Woodman *et al.*, 1993). As more than a planned process, innovation operates in dynamic environments that are influenced by various social and contextual factors (Barron, 1988; Campbell, 1960; Plsek, 1996; Simonton, 1988). For example, Powell *et al.* (1996) suggest that in collaborations, innovative success depends on the collaboration's ability to develop, integrate and redistribute new ideas. Similarly, Tannenbaum (1997a) suggests that alliance creativity promotes the exploration of ideas to develop new solutions and thereby promotes learning. Creativity applied through creative problem solving should lead to improvements of creative thought and the development of new combinations of information and learning

(Bharadwaj and Menon, 2000; Larson and Christensen, 1993; McFadzean, 1996; Reynolds, 1994).

H2: *Alliance creativity has a positive effect on alliance learning.*

Absorptive capacity

Recognition of the role of external knowledge has resulted in its increased usage as a means to foster innovation and enhance performance (Ireland *et al.*, 2002; Lichtenthaler, 2009; Zollo *et al.*, 2002). The ability to exploit external knowledge thus drives alliance innovation success (Cohen and Levinthal, 1990). In collaborative arrangements knowledge accumulation and integration depend on absorptive capacity, which has been linked to innovation through its role in encouraging the development of existing knowledge (e.g., Szulanski, 1996) especially for commercial purposes and gain (Cohen and Levinthal, 1990). The role of absorptive capacity in relation to external knowledge also has been emphasised with regard to its influence on the extent to which knowledge can be produced, exchanged and used in the selection or rejection of creative actions and innovations (Ford, 1996; Mangematin and Nesta, 1999). Cohen and Levinthal (1990) suggest that units with high absorptive capacity have a greater ability to produce more innovations.

H3: *Absorptive capacity has a positive effect on alliance innovation.*

Because absorptive capacity influences the extent to which the firm can learn and reproduce new knowledge (Tsai, 2001) it is reasonable to predict that low absorptive capacity instead hinders knowledge transfer and accumulation (e.g., Szulanski, 1996). In a situation in which competition is largely knowledge based (e.g., Teece and Pisano, 1994) and alliances tend to form to leverage the unique and complementary capabilities of partnering firms, it is important that firms can identify and integrate new knowledge to strengthen their own capabilities and respond effectively to the market (Dierickx and Cool, 1989). Yet a firm's knowledge is both tacit and explicit, contextualised by firm-specific socialisation and procedures that make it difficult to replicate (Lane and Lubatkin, 1998). This complexity and the simultaneous need for an efficient integration of new knowledge brings the critical role of learning within the alliance to the fore as an enabler of the much needed internalisation of external knowledge (Lane and Lubatkin, 1998). Thus, absorptive capacity determines the extent to which new knowledge is identified and understood in the context of existing capabilities and then internalised through learning.

H4: *Absorptive capacity has a positive effect on alliance learning.*

Alliance learning

Recent suggestions that organisational learning competency contributes to organisational innovation potential (Goswami, 2011; Forsman, 2009) stems from the reconceptualisation of the organisation as a center of learning and knowledge accumulation (Powell *et al.*, 1996). This focus has been instrumental in inspiring the increasing attention on alliance learning. This trend is consistent with prior suggestions that alliances increasingly focus on learning as an important objective (e.g., Inkpen and Crossan, 1995; Khanna *et al.*, 1998; Stata, 1989). Partners thus ally on the basis of their complementarities; even if learning is unintended (e.g., Grant and Baden-Fuller, 2004), alliances continue to provide an ideal platform for learning (Inkpen and Pien, 2006).

Alliance learning becomes manifest as a process that comprises a set of shifting and interlocking relationships with malleable boundaries (Araujo, 1998) which affects alliance innovation (e.g., Dodgson, 1991; Imai *et al.*, 1985; Kanter, 1988; Loveridge and Pitt, 1990). It also may be influenced by creativity, which promotes the exploration and development of new ideas and solutions (Tannenbaum, 1997b) as well as knowledge in the form of re-combinations of existing information (Larson and Christensen, 1993; McFadzean, 1996; Reynolds, 1994). Alliance learning thus is a central component of the broader model of alliance innovation and critical for innovative outcomes (Powell *et al.*, 1996). We adopt Kale and Singh's (2007) definition of alliance learning — as deliberate efforts to articulate, codify, share and internalise alliance management know-how (e.g., alliance creativity, absorptive capacity).

H5: *Alliance learning has a positive effect on alliance innovation.*

Despite recognition that existing knowledge connects alliance learning and alliance innovation, the precise role of alliance learning and its mechanisms for developing alliance capabilities remains incompletely understood (Heimeriks *et al.*, 2007). Kale and Zollo (2005, p. 94) acknowledge that 'the road toward a thorough understanding of the learning mechanisms underlying the development of partnering capabilities is still long and poorly lit', a characterisation that is consistent with Inkpen's (2002) view: Despite extensive alliance learning research, many theoretical and practical issues, including how alliance knowledge gets transferred and how it functions in the context of the alliance relationship, have not been adequately addressed.

Furthermore, extant research suggests that alliance creativity and absorptive capacity are logical antecedents of alliance innovation, yet studies consistently demonstrate that alliances are difficult to manage and at least half of them fail (Kale and Singh, 2007; Sivadas and Dwyer, 2000). To achieve greater chances for

alliance success firms need to develop a dedicated alliance function that oversees and coordinates alliance activities (Kale and Singh, 2007; Salge *et al.*, 2012). Recent studies support a mediating role of alliance learning, which facilitates knowledge exchanges and more positive alliance outcomes (e.g., Inkpen and Pien, 2006); and some research further suggests that alliance capabilities can be developed by integrating mechanisms such as learning (Heimeriks *et al.*, 2007; Lane *et al.*, 2001). We hypothesise in turn that alliance learning is a key mechanisms through which alliance creativity and absorptive capacity lead to greater alliance innovation success.

H6: *Alliance learning mediates the effects of (a) alliance creativity and (b) absorptive capacity on alliance innovation.*

Research Design

The data for this study were collected using a single cross-sectional design. The sample consisted of 2,000 randomly selected cross-industry firms obtained from an Australian mailing house. All firms were classified as medium to large in terms of size and were selected on the basis that they had formed at least one alliance.

Each of the 2,000 firms in the sample were posted a survey and self-addressed reply paid envelope. The packages were addressed to the General Manager, Chief Executive Officer or Managing Director, as specified on the database list, who were asked in a cover letter, to pass the survey on to an Alliance Manager for completion and return within two weeks of receipt. Following prior studies, the key informant selected to respond our survey was the manager who had operational responsibility for an alliance team and hence, greater insight into the day-to-day and overall aspects of the collaborative innovation process (e.g., Borg and Gall, 1989; Kumar *et al.*, 1993). The key informant was asked to complete the questionnaire using their recollection of (only) one alliance that they had managed in the past (at least six months prior) and possessed detailed knowledge about. To increase the participation rate, reminders were faxed to each firm approximately one week and three weeks after the initial posting of surveys. In total, 389 useable questionnaires were returned generating a response rate of 19%. A comparison of the first and second wave data, as a test of nonresponse bias, revealed no significant differences between samples.

Construct measures

We measured *alliance creativity* with four items adapted from Menon *et al.* (1999) using a seven-point scale (1 = 'completely inaccurate' to 7 = 'completely accurate'). Respondents also evaluated *absorptive capacity* with six items on a

seven-point scale (1 = 'strongly disagree' to 7 = 'strongly agree'), adapted from [Soo \(1999\)](#). We measured *alliance learning* with eight formative items on a seven-point scale (1 = 'people don't spend any effort in learning about...' to 7 = 'people spend considerable effort in learning about...'). *Alliance innovation* was measured using eleven formative items on a seven-point scale (1 = 'not at all' to 7 = 'very frequently'), adapted from [Soo \(1999\)](#). As shown in [Table 1](#), all the indicators in the outer-measurement models had acceptable bootstrap critical ratios (> 1.96) with loadings of reflective items (0.64–0.91) above the 0.5 level ([Hulland, 1999](#)).

We noted that the observed correlations among formative indicators are not explained well by the measurement model, in that they can have positive, negative or no correlation with one another ([Bagozzi, 1994](#); [Diamantopoulos and Winklhofer, 2001](#); [Hulland, 1999](#)). We did not assess the reliability or construct validity of the formative measurement models of alliance learning and alliance innovation. To determine the convergent validity of the reflective constructs, we calculated composite reliability, drawing on standardised loadings and measurement error for each item ([Shook et al., 2004](#)). As we show in the second column of [Table 2](#), the composite reliability values are above the 0.70 threshold ([Hulland, 1999](#)). We assessed the discriminant validity of reflective constructs in two ways. First, the average variance extracted (AVEs) values for the reflective constructs, alliance creativity and absorptive capacity, were uniformly acceptable, ranging from 0.52 to 0.67. In support of discriminant validity, the square roots of the AVEs (0.72–0.82) were greater than all corresponding correlations of the constructs. Second, we followed [Gaski and Nevin's \(1985\)](#) recommendation and assumed satisfactory discriminant validity among constructs when the correlation between the two constructs was not higher than their respective reliability estimates. As we show in [Table 2](#), no individual correlations (0.34–0.71) were higher than their respective reliabilities (0.88–0.96), which indicates the satisfactory discriminant validity of all constructs.

Common method bias

We assessed common method bias because the data came from a single data source. First, we employed procedural remedies such as protecting respondent anonymity, reducing evaluation apprehension and improving item wording. Second, we used the marker variable technique suggested by [Lindell and Whitney \(2001\)](#) and [Malhotra et al. \(2006\)](#) as a key statistical remedy. We selected the number of alliances in which the informants had been involved as a marker variable to control for common method variance ($r_M = 0.07$, $p = 0.37$). The mean change in correlations of all constructs ($r_U - r_A$) when partialling out the effect of r_M was 0.04, which offers no evidence of common method bias.

Table 1. Measurement model results.

Constructs and manifest variables	Loading/weight
<i>Alliance creativity</i> ^a (AVE = 0.67)	
Experiment with nontraditional methods in our decision making	0.64
Brainstorm for 'out of the box' solutions	0.87
Have a positive attitude towards creativity	0.91
Have novel solutions during decision making	0.83
<i>Absorptive capacity</i> ^a (AVE = 0.52)	
This alliance has processes in place to readily apply newly acquired knowledge to existing work situations.	
This alliance has structures for recording and sharing knowledge.	0.77
This alliance organises training programs (workshop, self training, etc.) to update skills.	0.79
This alliance provides opportunities for informal networking to source knowledge.	0.73
This alliance utilises computer-based knowledge infrastructure.	0.67
In this alliance information moves freely between our firms.	0.64
<i>Alliance learning</i> ^b	
Administration or managerial techniques/practices/policies	0.43
Political and legal aspects	0.47
Cultural aspects	0.59
Marketing techniques	0.50
Product-related technologies	0.80
Competitor products	0.64
Customers	0.73
Production/manufacturing technologies	0.30
<i>Alliance innovation</i> ^b	
New product prototypes (still in the development stage)	0.59
New products or services introduced to the market that are new to the market or the firm	0.62
Significant modification to existing products or services	0.77
New/modified production or manufacturing techniques	0.49
New/modified administration or managerial techniques/practices/policies	0.55
New/modified marketing (including advertising and distribution) techniques	0.54
Patents either applied for, pending or obtained	0.40
Publications in academic, scientific or technical journals by people in the alliance	0.38
Formal presentations at conferences or seminars	0.42
Licenses or technology rights sold	0.49
Licenses or technology rights purchased	0.44

^aLoadings of reflective items.

^bWeights of formative items.

Table 2. Construct-level measurement statistics and correlation matrix.

Constructs	Internal consistency	Alliance creativity	Absorptive capacity	Alliance learning	Alliance innovation
Alliance creativity	0.89	0.82			
Absorptive capacity	0.87	0.42	0.72		
Alliance learning	—	0.34	0.48	—	
Alliance innovation	—	0.45	0.44	0.54	—
Mean		4.48	4.66	4.37	3.33
SD		0.92	1.10	1.07	0.98

Note: Diagonal entries show the square roots of the AVE; other cells represent correlation coefficients, means and standard deviations.

Findings

As we show in Table 3 (Model 1), alliance creativity ($\beta = 0.20, t = 2.47$) and absorptive capacity ($\beta = 0.50, t = 6.74$) have positive and significant effects on alliance learning, in support of H1 and H2. The results in Model 2 show that alliance creativity ($\beta = 0.41, t = 7.02$) and absorptive capacity ($\beta = 0.32, t = 5.49$) also exert positive and significant effects on alliance innovation, in support of H3 and H4.

To test for the mediating effect of alliance learning, we followed Baron and Kenny’s (1986) procedure. According to Model 3, alliance learning ($\beta = 0.40, t = 5.05$) has a positive and significant effect on alliance innovation, in support

Table 3. Standardised path coefficients (*t*-values).

Independent variables	Alliance learning		Alliance innovation	
	Model 1	Model 2	Model 2	Model 3
Main effects				
Alliance creativity	0.20* (2.47)	0.41* (7.02)	0.31* (4.34)	
Absorptive capacity	0.50* (6.74)	0.32* (5.49)	0.13 (1.85)	
Mediating effect				
Alliance learning	—	—	0.40* (5.05)	
R-square	0.38	0.40	0.48	
Sobel <i>t</i>-Test				
H6a: SE _{indirect effect}	= 0.032; z-score = 2.76, $p < 0.01$			
H6b: SE _{indirect effect}	= 0.047; z-score = 4.02, $p < 0.01$			

of H5. When we compare Model 2 with Model 3, we recognise that including alliance learning decreases the effect magnitude of alliance creativity ($\beta = 0.41$ versus $\beta = 0.31$), in support of H6a, which suggests partial mediation. However, the inclusion of alliance learning makes the positive effect of absorptive capacity on alliance innovation insignificant ($\beta = 0.32$ versus $\beta = 0.13$). Thus, alliance learning fully mediates the relationship between absorptive capacity and alliance innovation, in support of H6b. We also undertook a Sobel (1982) test; the increase in the *R*-square value of alliance innovation attributable to mediating effects is significant at the 0.05 level. However, when we tested the moderating effect of alliance learning, we found no significant interaction effects between alliance learning and alliance creativity on alliance innovation ($\beta = 0.02$, $t = 0.35$) or between alliance learning and absorptive capacity on alliance innovation ($\beta = 0.07$, $t = 0.81$).

Discussion and Implications

Drawing on contingency theory, this study contributes to alliance literature by examining how alliance learning matters for transforming alliance creativity and absorptive capacity into alliance innovation. The findings emphasise the mediating role of alliance learning regarding the effects of alliance creativity and absorptive capacity on alliance innovation. This new insight implies that alliance learning is a contingency factor that must be taken into consideration during the alliance innovation process. This insight is particularly important in light of the increasing interest in developing dedicated alliance functions that can oversee and coordinate alliance activities (Kale and Singh, 2007; Salge *et al.*, 2012).

Because in its active role, alliance learning serves as a mediator rather than a moderator, alliance firms should recognise that simply having alliance creativity and absorptive capacity is not sufficient to ensure successful alliance innovation. That is, these alliance activities are not inherently valuable, though their potential value can be fully realised with the purposeful integration of alliance learning. This finding also implies that if we examined only the direct effects of alliance creativity and absorptive capacity, their contribution to alliance innovation would not be evident. Firms should effectively balance the development of alliance creativity, absorptive capacity and alliance learning to enhance their alliance innovation. Our findings are consistent with previous studies that indicate that the alliance learning process mediates the impact of the alliance function on alliance success (Sluyts *et al.*, 2011).

The managerial implications of alliance partners learning to work together are equally important. Our findings suggest that though alliance creativity and absorptive capacity are key drivers of alliance innovation, the management of

learning is central to success. Managers should realise that their alliance businesses need a strong alliance learning process if they are to internalise the know-how that is generated from alliance creativity and absorptive capacity. Alliance learning acts as an essential mechanism for transforming knowledge embedded in alliance creativity and absorptive capacity into alliance innovation. Thus, although alliance businesses still need to encourage alliance creativity and pursue absorptive capacity, their ability to learn to work together ultimately represents the source of competitive advantage. Our findings clearly highlight the need for a careful consideration of within- and between-alliance learning to achieve a more effective use of alliance creativity and absorptive capacity that leads toward successful alliance innovation.

Limitations and Directions for Further Research

This study has several limitations that require consideration. First, alliance relationships evolve over time in terms of structure and objectives; alliance learning also likely evolves over the lifespan of an alliance (Inkpen, 2000). Further research should use longitudinal data to examine the impact of alliance learning across different points in time. Second, this study uses a key-informant survey. Earlier studies suggest that key informants provide detailed insights into processes that enable the researcher to understand the studied phenomenon (e.g., Borg and Gall, 1989) and that they are appropriate because they are knowledgeable about the topic area and are able and willing to communicate this information (Kumar *et al.*, 1993). However, we acknowledge that relying solely on key informants in one time period may present concerns common to much survey research such as social desirability bias and other issues related to using hindsight for recall of processes or events. Additional research with multiple informants across multiple organisational levels (e.g., senior managers, middle managers, employees, customers) likely would provide further insights and offer greater confidence in our findings. Third, this study emphasises the importance of broad alliance learning without addressing specific forms of alliance learning, such as exploratory, exploitative or transformative learning (Lichtenthaler, 2009). Researchers should examine how these complementary learning processes might transform alliance management know-how into alliance innovation and marketplace performance.

Conclusion

Alliance learning is a complex phenomenon with important organisational and inter-organisational consequences (Inkpen, 2002). Through this study, we have demonstrated the important role of alliance learning, which acts most effectively as

a mediator of the relationship among alliance creativity, absorptive capacity and alliance innovation. This finding advances theoretical understanding of the role of learning in alliance structures and answers Inkpen's (2002) call for researchers to appreciate and uncover the complexity of learning and knowledge management. In addition, the distinction of the specific role played by learning in the context of alliances can help future researchers explore the specific role of alliance learning in various contexts.

From a practical perspective, the implications are far reaching. Although learning is often an important alliance motive (Inkpen, 2002), we have been hindered by limited understanding of how it works. By providing evidence that supports a conceptualisation of learning as a mediator — or a function that enables creativity and absorptive capacity to affect innovation in a greater capacity — we help alert managers to the critical function of learning in the alliance. It requires attention and adequate resources that enable alliance creativity and absorptive capacity to be harnessed and converted into innovation. This contribution represents progress, in that it explores substantive managerial issues.

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