LEARNING TO DEVELOP ALLIANCE CAPABILITIES: KNOWLEDGE SHARING IN THE AURORA PREFERRED SUPPLIERS ALLIANCE NETWORK

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ABSTRACT

Strategic alliances have long been recognised as a valuable mechanism through which organisations can develop new capabilities. This study explores for the first time how an organisation's governance of its alliance network facilitates knowledge sharing that improves network performance and develops alliance capabilities. The study examined the case of Aurora Energy, an energy company operating in Tasmania, Australia, to determine how Aurora managed knowledge-sharing in its Preferred Suppliers alliance network. It contributes to knowledge about alliance capability development by demonstrating how Aurora's management of network conditions enabled Aurora and network members to share their emerging knowledge about collaboration and develop capabilities in network management and network participation.

INTRODUCTION

Strategic alliances have long been recognised as a valuable mechanism for organisational learning (Easterby-Smith, Lyles, and Tsang, 2008; Hamel, Doz, and Prahalad, 1989). Through alliances, organisations can learn by transferring knowledge from one partner to another (Pérez-Nordtvedt, Kedia, Datta, and Rasheed, 2008) or by generating new knowledge (Tsang, 1999). Extant literature on learning through alliances has predominantly focused on learning through knowledge transfer (McCutchen, Swamidass, and Teng, 2004; Shrader, 2001) because while knowledge acquired through collaboration can help organisations strengthen their competitiveness, alliance partners may also learn to neutralise a firm's competitive strengths (Becerra, Lunnan and Huemer, 2008; Hamel, 1991). The need to facilitate the sharing of knowledge necessary to achieve alliance goals while also preventing unintended knowledge transfer has focused scholarly attention on the governance of conditions which facilitate functional learning (Dussage, Garrette, and Mitchell, 2000; Harryson, Dudkowski, and Stern, 2008) and prevent dysfunctional learning outcomes (Gulati and Singh, 1998; Mohr and Sengupta, 2002). Recently, however, scholars (Kale, Dyer, and Singh, 2002; Pangarkar, 2003; Sampson, 2005) have begun to explore how organisations learn by generating new knowledge from their alliance experiences and developing alliance capabilities.

Alliance capabilities refer to organisational abilities to successfully manage alliances (Anand and Khanna, 2000). Alliance capabilities mediate the relationship between previous alliance experience and subsequent alliance performance (Heimeriks and Duysters, 2007). As they collaborate, alliance partners learn better ways to govern and

achieve alliance performance (Reuer, Zollo, and Singh, 2002). Sharing their emerging knowledge of collaboration requirements generates new insights about their partners, enhances trust and social capital and improves alliance operation (Doz, 1996). Recording and institutionalising emergent knowledge builds capabilities which can be used to improve future collaboration (Kale and Singh, 2007). By optimising learning within and across their networks of alliance relationships, organisations can enhance their development of alliance capabilities.

Studies of inter-organisational production networks and of dyadic strategic alliances indicate that organisations can foster learning within and across their alliance networks by managing network conditions. Production network research has found that the central hub or broker organisation in a supply chain network can foster network members' learning by nurturing a sense of community, teaching members how the network runs, identifying helpful behaviours, motivating members to improve, and helping them learn (Dyer and Nobeoka, 2000; Snow and Thomas, 1993). Evolutionary studies of dyadic alliances have found that alliance conditions mediate the adaptive learning that underpins alliance evolution (Arino and de la Torre, 1998; Doz, 1996), indicating that a broker's governance of network conditions could influence the learning and capabilities that result. This study contributes to knowledge about alliance network management and alliance capability development by exploring for the first time how the broker's governance of network conditions facilitates knowledge sharing that improves network performance and develops alliance capabilities. The study examined the case of Aurora Energy, an energy company operating in Tasmania, Australia, to determine how Aurora learned to manage

its Preferred Suppliers alliance network, and how members learned to operate under Aurora's network management. It found that the alliance conditions which mediate learning in dyadic alliances enabling the broker and network members to share their emergent knowledge of network operations, which fostered the broker's capabilities in network management and member capabilities in network participation.

The paper is structured as follows. First, we describe the study's theoretical framework and present the research question addressed by the research. Next, we describe the research method and present our findings. Finally, we conclude our paper by discussing the implications of our findings for theory, practice and future research.

THEORTICAL FRAMEWORK: DEVELOPING ALLIANCE CAPABILITIES

Capabilities are organisational abilities that create value by affecting transformation of inputs into outputs (Grant, 1996). The capabilities firms have determine how they perform activities or create resources that provide their competitive advantage (Lakhal, Martel, Oral and Montreuil, 1999; Makadok, 2001). Operational capabilities are patterns of action used to create, produce and take products to market (Laamanen and Wallin, 2009) and determine the competitive advantage that organisations achieve through their product offerings. Dynamic capabilities sustain competitive advantage by generating new value-creating strategies for leveraging resource bases (Eisenhardt and Martin, 2000), enabling organisations to combine internal and external competencies to address rapidly changing environments (Teece, Pisano and Shuen, 1997). Alliance capabilities represent a specific form of dynamic capability that organisations use to leverage resources from

internal and external sources in ways that create value (Eisenhardt and Martin, 2000), and are developed through organisational learning.

Organisations develop capabilities through trial-and-error testing of action routines intended to achieve desired states within the environment. Organisations learn about the effectiveness of past actions and apply that knowledge to guide future behaviour (Fiol and Lyles, 1985). Organisational learning results from the learning that individuals undertake as organisational agents (Argyris and Schon, 1978). Individuals construct mental models of how the world operates (Senge, 1990), which they use to understand organisational situations (Weick and Boughton, 1986). They continuously develop knowledge about interacting with their environment through cycles of abstraction and reflection (Kolb, 1984). They predict from their cognitive maps the actions they need to interact successfully with their environment and judge from their experience the relevance and effectiveness of their models (Lembo, 1972). Confirmatory feedback strengthens the cause-effect beliefs based in current mental models and the expectation that models will effectively guide future action (Barr, Stimpert, and Huff, 1992). Contradictory feedback prompts re-evaluation of mental models and the development of new constructs to explain anomalous experiences (Laszlo, 1972). Individual-level learning transmutes into organisational learning when insights are communicated across the organisation, achieve consensual validity, and are integrated into organisational structures and procedures (Shrivastava, 1983).

Alliance relationships evolve through similar cycles of adaptive learning as partners evaluate and respond to information about the current and desired state of the collaboration (Kumar and Nti, 1998). Partners form alliances with expectations about each other, future actions and future benefits, which they enact when executing their commitments to the relationship (Ring and Van de Ven, 1994). An initial trial of inter-organisational collaboration provides feedback about collaboration effectiveness upon which partners base decisions about continuing to collaborate and / or adapting their commitments and actions (D'Aunno and Zuckerman, 1987; Van de Ven and Walker, 1984; Zajac and Olsen, 1993). As partners learn, they create interacting cycles of adaptation to each other (Buchel, 2000; 2002).

Studies of alliance evolution indicate that alliance conditions determine what partners learn and how they adapt to each other. Doz (1996) found that the initial conditions of the alliance determined whether partners could learn to achieve successful alliance outcomes. His study focused specifically on three issues: whether firms adapted their collaboration in response to learning and feedback; the conditions that blocked or facilitated learning; and how learning influenced alliance evolution. Adopting a nested case study approach, Doz (1996) examined six collaborative projects between three alliance dyads (two projects per alliance relationship). He found that partners' cognitive and behavioural learning experiences determined the developmental pathway for successful and unsuccessful alliances. Six initial conditions influenced learning potential: the definition of the alliance task, the action routines brought to the alliance by each partner, the interface structures through which partners communicate and

exchange resources, expectations about the alliance's performance, expectations about each other's motives, and expectations about each other's behaviour (Doz 1996). The initial alliance conditions mediated partners' cognitive learning about the success factors required for the collaboration, and behavioural learning about how to achieve them. In successful alliances, partners learned what was needed to collaborate successfully and then learned to adapt alliance conditions to fulfill success requirements. In unsuccessful alliances partners learned what was needed for success but recognising they were unable to unable to make the necessary adaptations, they terminated the relationship.

Arino and de la Torre's (1998) study of a failed international joint venture concurs that alliance conditions mediate learning outcomes. They found that the quality of relationship between alliance partners and the presence of mechanisms for re-negotiating alliance terms determined whether partners share their emergent understanding or adapt their alliance unilaterally. As partners worked together, adaptive learning cycles fed back into perceptions of relationship equity, efficiency and quality. High relationship quality and/or mechanisms for renegotiating alliance conditions fostered readjustments to contribution and distribution rules and the establishment of a new equilibrium in the relationship. Low relational quality or failure to successfully renegotiate prompted unilateral corrective action, which resulted in a deterioration of the relationship.

The recognised influence of alliance conditions on adaptive learning processes suggests that the hub firm or broker of an alliance network can facilitate learning by governing alliance conditions in ways that facilitate knowledge generation and sharing across the

network. To explore this possibility, the study examined the following research question: *How does a network broker's management of network conditions facilitate broker and member learning?*

METHOD

This study addressed the research questions through an exploratory, in-depth, case study of Aurora Energy's Preferred Suppliers alliance network between 1992 and 2005. The Aurora Preferred Suppliers network is a hub-and–spoke network of dyadic alliances between Aurora Energy (hereafter Aurora) and fourteen retailers of electrical heating appliances which operates in Tasmania, an island state located off the south coast of Australia. Aurora and the Preferred Suppliers collaborated to increase the Tasmanian market for residential electric heating. Aurora provided Preferred Suppliers with sales leads and Preferred Suppliers' appliances sales generated, in turn, customer conversions to Aurora's electrical heating energy tariff. Aurora's monopoly position in the Tasmanian electricity market established an atypical context for the network's operation which heightened its value for studying how alliance capabilities develop. During the period examined by this study, Aurora (formerly the Hydro Electric Commission) was the only electricity retailer with whom network members could ally so Aurora and the Preferred Suppliers learned about network management and participation solely from their experiences of the Preferred Suppliers network. Consequently, the study was able to isolate and explore learning outcomes which resulted exclusively from the broker's governance of network conditions, enhancing the accuracy and strength of the research findings.

The study utilised data from interviews, documentation and secondary data sources. Four objectives framed data collection and analysis: determination of the network's chronological history; determination of the organisational design underpinning the network's operations; identification of the adaptations made by Aurora and Preferred Suppliers during their involvement; and the learning that underpinned these adaptations. Secondary data sources such as newspaper articles, marketing publications and Aurora's company documents were used to develop the initial time line of the network's development and identify issues for investigation in interviews. Primary data were collected through twenty-three semi-standardised interviews conducted with the members of Aurora Energy's network management team and individual managers from each Preferred Supplier business (see Table 1). Interviews addressed three major themes of participants' experiences: the events they experienced; their expectations for, and understanding of, network operation; and their evaluations of network involvement.

QSR International's N-Vivo software program supported each phase of data analysis. Interview recordings, document extracts and research notes were transcribed into Microsoft Word™ documents and imported into N-Vivo. Data categories ('nodes') specific to each research objective were established and document contents were coded exhaustively into all relevant categories. Coding data in N-Vivo is a two-step process visually resembling the Copy and Paste functions of Microsoft Word™. The first coding step entailed highlighting the relevant text in the source document, akin to selecting text for Copying in a Word™ document. The second step assigns the data to selected nodes or to newly created nodes which are titled to reflect the substance of the text. Coding

Table 1: Participants interviewed in the study

Participants	Description	Year joined the network
Aurora Energy		
Network Manager	Managed the Preferred Supplier Scheme from 1997 until 2004.	1997
New Network Manager	Managed the Preferred Supplier scheme from 2004.	2004
Network Marketing Manager	Managed Aurora Energy's Marketing Services department.	1993
Training Officer	Trained Aurora staff and Preferred Suppliers about generic benefits of electric heating and to calculate heater capacity.	1998
Network Administration Officer	Managed database for heating–related calls to Aurora Energy's call centre and sales lead referrals to Preferred Suppliers.	1998
Quality Assurance Officer	Monitored Preferred Suppliers' compliance with alliance conditions.	1998
Preferred Suppliers		
AirCon1	Co-owner of air conditioning and radiant heating business located in north west Tasmania.	1997
AirCon2	Residential sales manager for the Tasmanian branch office of a national company specialising in air conditioning systems.	1993
AirCon3	Managing director of air conditioning, electrical contracting and refrigeration company located in southern Tasmania.	1992
AirCon4	Owner of specialist air-conditioning business located in southern Tasmania.	1992
AirCon5	Owner of refrigeration and air-conditioning business located in southern Tasmania.	1997
AirCon6	Tasmanian Branch manager for air conditioning business located in northern Tasmania.	2002
Refrigeration1	Co-owner of refrigeration and air-conditioning business located in north west Tasmania.	1997
Refrigeration2	Owner of refrigeration and air-conditioning business located in northern Tasmania.	1992
Heating1	State manager for electric heating business	1997
Heating2	Tasmanian branch manager for a Danish heating company specialising in radiant heating systems	1996
Electrical1	Owner of electrical contracting business located in northern Tasmania.	1998
Electrical2	Owner of electrical contracting and heating company located in southern Tasmania.	1997
Retailer1	Store manager of furniture and electrical goods retailer located in southern Tasmania.	1998
Retailer2	Owner of furniture and electrical goods retailer located in northern Tasmania.	1997

hyperlinks the text in the source document to the node. Opening the node presents the selected text as though Pasted in a Word™ document, annotated with the source document reference details.

Triangulation, checks for coding accuracy and peer review optimised the study's internal validity. Triangulation refers to the combination of several research approaches to broaden understanding of the research phenomena (Veal, 2005), which in this study entailed methodological triangulation, source triangulation, and multiple analytical techniques. Interviews and secondary data facilitated methodological triangulation through the use of several data-gathering techniques (McMurray, Pace, and Scott, 2005). Data from documents and participant interviews facilitated source triangulation through the use of a number of different data sources (Merriam, 2002) to verify event occurrences. Analytical methods were triangulated by executing distinct coding and interpretative stages to achieve each research outcome. Comparing analytical outputs and conclusions for each stage enabled checking of coding rigour and of support for conclusions. Senior colleagues experienced in using N-Vivo tested coding accuracy and internal validity by reading the raw data and the interpretative memos pertaining to each conclusion.

Triangulation, checks for coding accuracy, peer review and an audit trail were used to optimise the study's reliability. The triangulation strategies, coding checks and review processes detailed above optimised reliability by making the links between the data and conclusions transparent. Project logs recorded the audit trail of research steps. External validity was optimised by describing in detail the research case characteristics and

findings, ensuring the closest and most compatible match between research conditions and those in which the findings are applied (Cavana, Delahaye and Sekaran, 2001).

OPERATION OF THE PREFERRED SUPPLIERS NETWORK

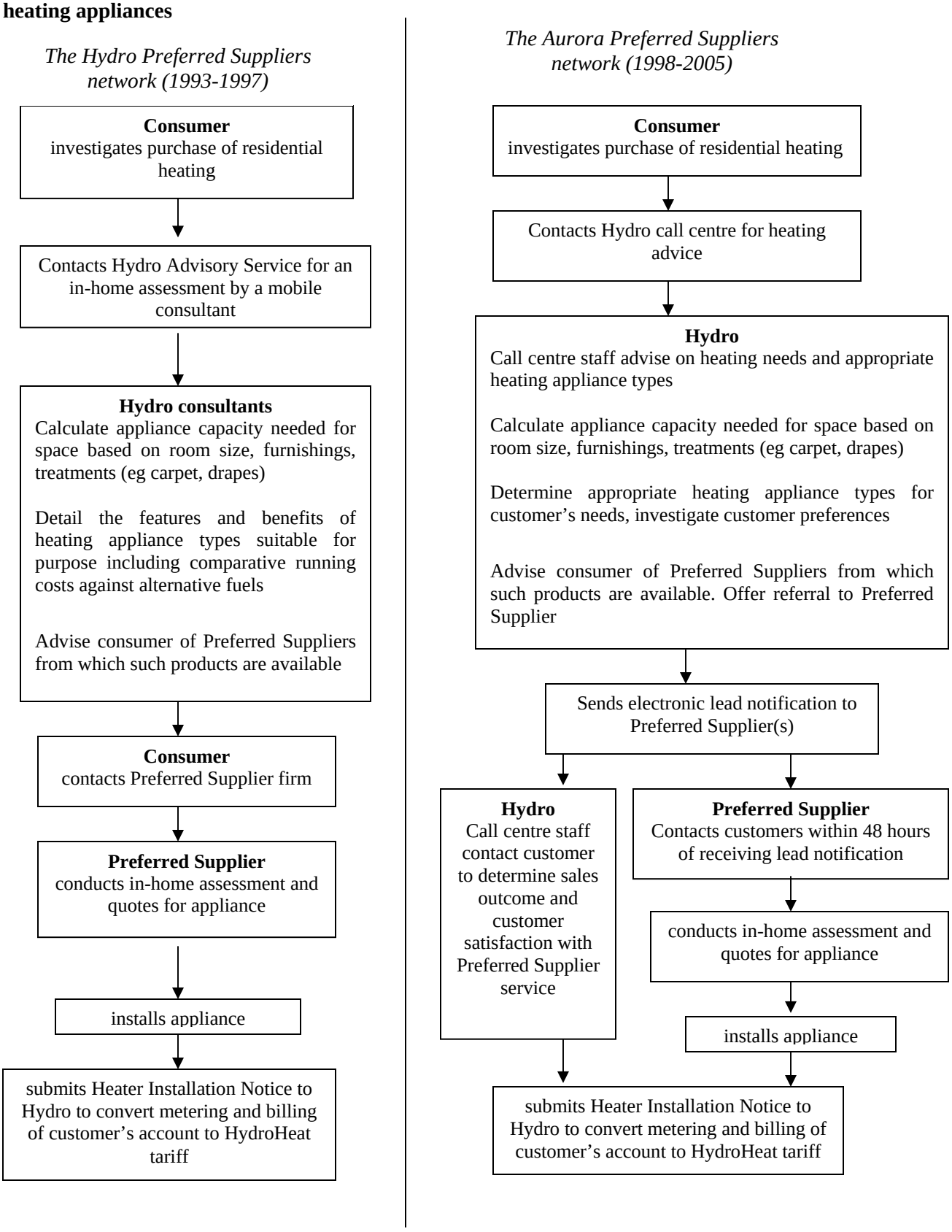
Aurora, then known as the Hydro Electric Commission ('the Hydro') established the Preferred Suppliers network in 1993 to promote purchases of electric heating appliances, and, by extension, of electricity for heating purposes. Between 1993 and 1997 the Hydro established alliance relationships with over one hundred electric heating appliance retailers. The Hydro's Heating Advisory Service and provided free in-home assessments of consumers' heating needs and promoted Preferred Suppliers who sold suitable appliances. Preferred Suppliers' sales of heating systems increased, in turn, consumer uptake of the Hydro's HydroHeat electricity tariff.

During 1996 and 1997, the Hydro re-developed their collaborative strategies for the Preferred Suppliers network in response to changing environmental conditions and strategic objectives. In 1995, the Tasmanian Government radically altered the Hydro's strategic context by legislating the de-regulation of the Tasmanian energy market and entry into the Australian national energy market by 2005. Preparatory to the Hydro's competition in the national market, the Tasmanian Energy Regulator was charged with regulating the commercial competitiveness of the Hydro's pricing by reviewing the Hydro's tariffs and retail margins every three years. In mid 1996 the Tasmanian Pricing Regulator conducted its first review of Hydro pricing strategies and capped the Hydro's retail margins on energy sales at ten per cent, eliminating AU$10 million from the

Hydro's projected operating revenue. This established a strategic imperative to make up the shortfall by increasing revenues and reducing operating costs. To increase revenues, the Hydro resolved to increase market share in the residential heating energy market, which in 1996 reached forty five per cent (Hydro Electric Commission, 1996). To reduce operating costs the Hydro closed its Hydro Shop retail outlets and centralised or outsourced its customer service functions. Recognising that advising customers about electric heating was strategically crucial to increasing market share for the HydroHeat tariff, in 1998, the Hydro, now known as Aurora Energy, re-established the Preferred Suppliers network to establish members as Aurora-substitutes in heating advice provision. Figure 1 illustrates the two operational models for the Preferred Supplier network.

Aurora established new performance standards for network members to ensure their customer service was of the same quality as Aurora's. Re-focusing the network on superior customer service established new network conditions, performance standards and a smaller membership: only fifteen of the one hundred and seven Preferred Suppliers re-established alliances with Aurora under the new alliance terms. Between 1998 and 2005 the network operated in the premium sector of the Tasmanian residential heating appliance market as a retail channel for electric heating systems differentiated by superior customer service. Consumers contacting Aurora for heating-related advice were directly referred to Preferred Suppliers for an in-home assessment of their needs. Under the "Aurora Preferred Suppliers" endorsement Aurora guaranteed the quality of Preferred Suppliers' customer service.

Figure 1: Operation of the Preferred Suppliers network as a retail channel for electric heating appliances



Governance of knowledge-sharing in the Aurora Preferred Suppliers network

By managing the network's operations and development, Aurora's network management team governed the learning system through which Aurora and the Preferred Suppliers learned to leverage and improve the value of their alliances. Network conditions facilitated knowledge sharing which enabled Aurora and the Preferred Suppliers to generate two distinct forms of value from their alliance relationships: the network outcomes which improved their respective business positions, and new capabilities in utilising alliance relationships. They learned how network operations enhanced their organisational positions, and they learned how to adapt network operations to improve network performance.

Knowledge shared through the network's task definition and expectations for partner's behaviour

Aurora's team began developing their knowledge of network management when they formulated Aurora's original collaborative strategy. Having introduced the first electricity tariff targeted at the electric heating market, the Hydro recognised that consumer uptake of the tariff would depend upon increasing adoption of electric heating and formed the Preferred Suppliers network to encourage sales of electric heating systems. By defining the network's task and expectations for partners' behaviour team members developed their conceptual understanding of how the network would operate and create value. The Preferred Suppliers code of practice formally defined the network's task as "simplify[ing] and streamline[ing] for customers, the process of purchasing and having installed electric

space heating in their home…[by] “do[ing] the ‘running around’ for the customer” (Hydro Electric Commission, 1993a: 1).

The Hydro’s alliance proposal and network code of practice defined the expectations for each party’s behaviour. As the state authority on electricity, the Hydro’s task focus would be promoting purchases of electric heating appliances. The Hydro would stimulate consumer interest by promoting electric heating, offering an electricity tariff which made electric heating competitive against alternatives such as oil, gas and wood heating, and providing a free advisory service to consumers about their heating needs. Heating advisors provided free in-home assessments of consumers’ heating needs, advice about installation and usage considerations, recommendations for appliances suitable for the customer’s requirements, and referrals to Preferred Suppliers that stocked products suiting their requirements. As the network manager, the Hydro would govern the Preferred Suppliers network by recruiting members, providing training and resources, enforcing network participation conditions, and collating sales information about network outcomes. As Preferred Suppliers’ advocate, the Hydro would promote the Preferred Suppliers network to consumers. Under the Aurora Preferred Suppliers network conditions, Aurora also committed to guarantee network members’ service quality by acting as mediator and facilitator of customer complaint resolution. Aurora would investigate complaints about Preferred Suppliers’ sales and installation practices and when Preferred Suppliers were found responsible for customer problems, Aurora would enforce rectification at the Preferred Suppliers expense. When investigations confirmed

Preferred Suppliers' compliance with performance standards, Aurora would finance complaint resolution.

The Preferred Suppliers were expected to promote the uptake of electric heating by providing a positive experience of buying electric heating systems. This included complying with participation standards for the presentation of business premises and vehicles, for the appearance and behaviour of staff and for actively promoting their businesses as network members (Hydro Electric Commission, 1998a; 1998b; 1998c).

Defining the network's task and expectations about each party's behaviour established performance standards for Aurora as network manager, for network members, and for the Preferred Suppliers network as a retail channel. By communicating their conceptual knowledge about how the network would operate, Aurora's team instigated Preferred Suppliers' cognitive learning about network participation. Network members learned from the team's proposals how the network would operate, how Aurora and network members would each contribute to network processes, and the outcomes that would result. They learned what outcomes they could expect from membership and determined the likely benefits for their firm of being a network member, establishing their expectations for network performance and future alliance value.

Defining the network's task and expectations for partner behaviour also facilitated the Preferred Suppliers' sharing of knowledge with the Aurora team. Prior to the network's re-establishment in 1998, Aurora's team consulted with industry-leading Preferred

Suppliers about best industry practices for customer service and heating system installations. From Preferred Suppliers' feedback the Aurora team learned about whether their expectations for partners were achievable. Cognitive learning about realistic performance expectations prompted behavioural learning about adjusting network participation requirements.

Knowledge sharing through partner routines

Establishing a shared understanding of network operations, outcomes and value framed behavioural learning about developing routines to facilitate network operations. Aurora developed novel routines for developing the network's code of practice and participation criteria and for training Preferred Suppliers' sales staff. Under the Aurora Preferred Suppliers network conditions, Aurora also established new routines for investigating customer complaints against Preferred Suppliers. Preferred Suppliers incorporated network performance standards into operational routines for sales and installation services and under the Aurora Preferred Suppliers network conditions, developed routines to act upon sales leads received from Aurora and to support Aurora's investigation of customer complaints. Through their operational routines, Aurora and the Preferred Suppliers developed their knowledge about how to support network operations. Interacting through the network's interface structures and inter-organisational routines also allowed them to share their emerging knowledge about executing their tasks and roles.

Knowledge shared through interface structures and inter-organisational routines

The network's organisational design established several distinct interface structures and inter-organisational routines through which the Aurora team and Preferred Suppliers shared their knowledge about network operations. The first routine entailed an assessment of a potential member's fit with network participation requirements. New members were then provided with a Preferred Suppliers Kit, which communicated to network members the conditions, expectations and commitments underpinning the alliance relationship (Hydro Electric Commission, 1993b) and also contained resources for use in advertising and point-of-sale displays (Hydro Electric Commission, 1993c).

The second routine entailed training Preferred Suppliers to meet network performance standards through the Energy Advisory Course, which the Hydro periodically conducted at locations around Tasmania (Hydro Electric Commission, 1993d). Preferred Suppliers' sales staff were trained about the generic advantages of electric heating, identification of heater types and applications, and calculation of appliance capacity and operation costs under Hydro electricity tariffs (Hydro Electric Commission, 1993d). Through the training programs Aurora's team communicated their knowledge about how Preferred Suppliers should contribute to network operations. The training fostered Preferred Suppliers' cognitive learning about how they needed to perform as network members and behavioural learning about how adapt their operations accordingly.

Preferred Suppliers began their behavioural learning about alliance operation when they began executing their roles as network members. Eight Preferred Suppliers

acknowledged they learned from Aurora's team how they needed to operate as network members and adapted their organisational routines to comply with network standards. Adaptations included relocating their business operations in order to be able to provide a manned display showroom, adapting marketing activities and customer service routines to promote their firms as Preferred Suppliers, and adopting Aurora's practices for training staff and for providing advice to customers.

During network operations the Aurora team and network members shared their emerging knowledge about network operations through the interface structures and inter-organisational routines of sales lead referrals, forum meetings, visits to Preferred Supplier firms, Aurora's investigation of customer complaints, and the dissemination of network performance information. Aurora staff referred heating enquiries to Preferred Suppliers through the lead referral database in which staff in Aurora's call centre record information about the customer's contact details, needs, preferences and purchase intentions. Preferred Suppliers received an electronic notification which Aurora followed up four weeks after the initial call. Through the referral, Aurora staff shared their knowledge of customer needs and preferences with the Preferred Supplier, who then used that knowledge to inform their sales approach to the customer.

Complaints investigation processes allowed the Aurora team and Preferred Suppliers to develop and share their knowledge about good business practices. In order to evaluate Preferred Suppliers' customer service, the Aurora team consulted with network members about best industry practices for installing various heating systems. By sharing their

product and technical knowledge with the Aurora team network members helped to ensure their practices were evaluated realistically. Preferred Suppliers also learned how Aurora's team investigated customer complaints and this knowledge fostered additional learning about leveraging alliance value. Two Preferred Suppliers learned that the broker's guarantee protected their firms from being financially disadvantaged by customer complaints. Retailer1 recalled that the broker paid to have an appliance removed because "they said to me "you're not going to win against this customer. What can we do to help?". AirCon6 recalled that on two occasions, the broker retrospectively applied the customer service guarantee to customer complaints which pre-dated his network membership, and learning the broker team were "really good like that" and went "over and above what I expected" extended his understanding of alliance value.

Members learned to use the team's assistance to improve their after-sales service and resolution of customer issues. AirCon1 and Retailer1 learned to use the broker as a 'third umpire' to show the customer they were prepared to be reasonable and were committed to resolving the issue. Four Preferred Suppliers acknowledged they had learned to use the team for moral support when resolving customer issues. Refrigeration1 recalled that when dealing with a difficult customer, the broker's team "commended us on keeping calm", which helped the manager maintain a professional approach. AirCon5 learned to use team members' advice about wording his response to a customer's letter of complaint. Three Preferred Suppliers also acknowledged learning to adapt their record-keeping practices to better document their customer service practices in the event of a complaint investigation.

Regular group forums and social events allowed the Aurora team and Preferred Suppliers to share their knowledge about market developments, their goals and their problems with network operations. To foster knowledge sharing, the Aurora team hosted an annual state-wide Preferred Supplier forum and regular regional forums. The New Network Manager explained that the state-wide forum "mainly gets the business partners and one of the [sales staff]…it's a dinner, it's a relationship building exercise" whereas the regional forums targeted different audiences and purposes. The regional forums, attended by Preferred Suppliers' heating appliance installers, focused on explaining Aurora's organisational plans and strategies for the network because "sometimes you give the key players all the information and they don't hand it down" (New Network Manager). More broadly disseminating information about Aurora's plans enhanced Preferred Suppliers' organisational knowledge about the operations and future of the alliance network.

Preferred Suppliers learned from the Aurora team's forum presentations about industry trends and the broker's activities. Seven Preferred Suppliers described access to information as a major benefit of network involvement and four members acknowledged they had learned to use the team's information about network sales outcomes to benchmark their firm's performance. Preferred Suppliers noted that they also learned from each other about demand and supply levels around Tasmania. They acknowledged forums provided valuable opportunities to "prick your ears up" (AirCon1) about demand for different product types and general levels of business activity and to confirm market intelligence about other Preferred Suppliers' pricing strategies (AirCon4; Heating2).

Preferred Suppliers also shared their emerging knowledge about problems with network operations and other network members' behaviour with the Aurora team. Preferred Suppliers requested that the Aurora team intervene when they became concerned that a network member's use of discounting strategies was undermining alliance value. Learning about members' motives and behaviours helped the team teach Preferred Suppliers how to neutralise competitive threats and better leverage value from network participation. Realising they could not interfere with a members' pricing strategies, the Aurora team arranged several guest speaker presentations for network forum meetings which presented new ways to increase market share. By teaching members how to counter discounting strategies and develop new ways to compete, they reduced intra-network conflict and helped members develop their business capabilities.

Aurora also learned from Preferred Suppliers to change the way the team presented information about network outcomes. AirCon5 recalled the team initially reported sales outcomes in a very detailed pie chart that showed members' market shares by region and product category. In this way, members learned about each other's market positions. Preferred Suppliers protested that the pie chart "let people know how much of the slice of the pie we had" and "why their slice of the pie was bigger" (AirCon5), leading the team to change their reporting practices.

The Aurora team also learned to manage network performance evaluation processes in ways that enhanced Preferred Suppliers' satisfaction with their network participation. In 1999, a member's expressed intention to leave the network motivated the team to review

performance management arrangements. Aurora's team learned that network members were tracking network performance by the number of direct referrals received from Aurora's call centre. To encourage monitoring of customer traffic generated indirectly by network membership, the team provided Preferred Suppliers with sales lead enquiry forms to investigate lead sources. Preferred Suppliers determined that consumers who contacted them directly, because they were Aurora-endorsed firms, comprised a substantial proportion of their firm's customer traffic. The Preferred Supplier subsequently re-committed to network participation. In this way, generating and sharing new knowledge about network outcomes and performance measurement increased commitment to and satisfaction with network operations.

Regular visits to Preferred Suppliers' premises allowed the Network Manager and network members to learn about each other and about improving network performance. Site visits incorporated quality assurance and merchandising inspections and one-on-one discussion with Preferred Suppliers about their businesses, plans and any issues relevant to the network. Individual visits were introduced because at forum meetings "a lot of them in the group wouldn't talk out" (Network Manager). Introducing additional face-to-face consultations with alliance partners facilitated knowledge sharing between Aurora and the Preferred Suppliers in four ways. Firstly, Preferred Suppliers learned from the Aurora team's quality assurance inspections how successfully they had adapted to network requirements, and what additional adaptations were necessary. Secondly, learning about how members were performing helped the Aurora team to enhance their marketing of electric heating products. For example, feedback from Preferred Suppliers

about the heating systems they stocked, how many they sold and which systems were the most popular helped Aurora determine the focus of their advertisements for heating products. Thirdly, meeting with individual Preferred Suppliers fostered discussions of members' business plans and intentions, which enhanced Aurora's understanding of their partners' goals and motives. Fourthly, the individual meetings enabled the Network Manager to share his knowledge about ways in which Preferred Suppliers could achieve their business goals.

Greater knowledge of network members' goals and activities helped the Network Manager recognise the need to help Preferred Suppliers learn how to improve their network participation. Realising that members were "not structured for the growth they were taking on" the Network Manager began coaching Preferred Suppliers about improving their businesses. His assistance included helping members to negotiate competitive merchant fees on credit card transactions, to diversify into new business areas and to better position their businesses against rivals. Over time, the Network Manager learned to use his influence with the Preferred Suppliers to improve the network's performance context. He explained that when poor installation practices damaged perceptions of electric heating systems he encouraged a market-leading Preferred Supplier to run an ad campaign that explained how to identify a good heating system. He acknowledged that he fed this suggestion to the market leader so that other firms would follow their approach and also emphasise product and installation quality.

The Network Manager's business advice fostered Preferred Suppliers learning about improving their firm's performance and network participation. AirCon1 acknowledged that being a brand-new company "I suppose we picked his brain a little bit" and learned from the Network Manager about finance and marketing issues. AirCon5 reported that on the Network Manager's recommendation, his firm had expanded into a new product category and had subsequently doubled the number of referrals received from Aurora. He acknowledged that he had consequently learned to take the Network Manager's advice about new business ideas.

Learning about Preferred Suppliers' capabilities inspired the Aurora team to develop new resources and routines for sharing their knowledge about improving network marketing activities. Recognising that many Preferred Suppliers lacked marketing expertise, Aurora produced an information booklet about enhancing advertising effectiveness. The booklet detailed steps in advertising planning, evaluating advertising alternatives and media selection (Mazengarb Leo-Burnett, 2000). To enhance members' media selection, Aurora also collated and distributed information about effective radio and television advertising from the Radio Marketing Bureau and the Television Advertising Association. Aurora's Marketing Services department, led by the Network Marketing Manager, provided individualised assistance with creative concepts, script content and layouts for advertisements and signage. To increase their control over Preferred Suppliers' promotion of the network brand, the Aurora team also introduced a co-operative advertising support scheme through which members whose advertising promoted the network were partially reimbursed for their advertising costs. To qualify, members had to

submit advance plans for their advertising to Aurora. This enabled Aurora's team to monitor the brand's use and help network members improve their advertising activity.

Aurora's provision of marketing assistance fostered Preferred Suppliers' cognitive and behavioural learning to improve their firm's marketing performance. Two Preferred Suppliers acknowledged that they improved their marketing activities by working with Aurora's Marketing Services Department to develop advertisements (AirCon1) and using Aurora's information booklets to improve their advertising and marketing planning (AirCon6). The co-operative advertising initiative also taught Preferred Suppliers new ways to leverage value from their alliance relationship. Ten Preferred Suppliers acknowledged they had learned to adapt their network participation to benefit financially from the broker's co-operative advertising support, and five of the ten had reconceptualised alliance value according to the financial support they received through co-operative advertising.

CONCLUDING REMARKS

By managing the network's operations and development, Aurora's network management team governed the learning system through which Aurora and the Preferred Suppliers developed their alliance capabilities. The team's management of the network conditions of task definition, partner routines, interface structures, expectations about alliance performance, expectations about partner motives, and expectations about partner behaviour facilitated broker and network member learning. The network task definition framed cognitive learning about the network's purpose, operation, performance, and

development. Interface structures facilitated the generation and exchange of information about network operation and the testing of new insights and behaviours. Partner routines determined how the broker and network members learned to fulfill network roles and responsibilities, and their cognitive learning about each other's behaviour and capabilities. Expectations about partner motives influenced cognitive learning by framing assessment of each other's behaviour. Expectations for partners' behaviour likewise influenced learning by affecting who joined the network, how it operated and how it was developed. Expectations for alliance performance framed cognitive learning by fostering commitment to network involvement and by framing learning about performance gaps, performance improvements, and actual alliance value.

The findings suggest two implications for management practice. Firstly, the findings suggest that organisations can improve their alliance management by fostering alliance partners' learning. The research showed that by enhancing members learning, Aurora was able to improve network performance and alliance outcomes. By learning how to develop alliance relationships and foster learning, organisations could improve the longer term value of their alliances for business and learning outcomes. Secondly, the findings suggest that organisations can improve the value of their alliances by explicitly considering the learning value of potential collaborations. The study demonstrates that involvement in an alliance network can foster capabilities in network management and in network participation. Clarifying the capabilities an organisation wishes to develop would help managers evaluate alliance opportunities and select those which best fit the organisation's learning objectives.

The empirical design and research context of the study established limits to the study's contribution to theory, management practice and future research directions. Firstly, conducting a single, in-depth, historical case study of an operational alliance network posed a risk that imprecise and subjective recall, and post-hoc justification of network involvement, could bias the research findings. The research findings should therefore be interpreted as an indicative rather than comprehensive account of the conditions and learning dynamics that contribute to capability development.

Secondly, the atypical absence of competition between alliance partners optimises theoretical generalisability but limits the practical transferability of the findings. Aurora and the Preferred Suppliers did not compete in any markets so the alliance relationships between Aurora and network members were devoid of competitive tension. These conditions may have influenced the learning outcomes for the network in two ways. Firstly, Aurora and the Preferred Suppliers' operation in complementary industries reduced the risk that they could learn how to neutralise each other's competitive positions, which may increased their willingness to share knowledge and heightened learning outcomes. Secondly, Aurora's monopoly of the Tasmanian electricity market isolated the broker's and network members' learning systems from the influence of rival networks. The absence of rival alliance networks meant that Aurora and the Preferred Suppliers learned about alliances through direct experience rather than also learning by observing how other networks operated. The presence of competing alliance networks could also facilitate vicarious learning about alliance operation, so future studies should explore the

contribution of vicarious learning through observation to the development of alliance capabilities.

The research findings and limitations suggest several directions for future research. Exploring further how structural and social network conditions influence learning processes and outcomes would enhance understanding of how alliance capabilities develop. Exploring the learning processes and outcomes demonstrated under alternative network conditions invites investigation of the comparative merits of alternative conditions for facilitating learning. Understanding how network design elements facilitate learning would also enhance network use by enabling network organisational structures to be tailored for specific learning outcomes. Future studies could also explore the parameters to knowledge sharing through network conditions. This study identified three parameters to knowledge sharing in the Aurora Preferred Suppliers network. Competing priorities for network members' time and energy prevented Preferred Suppliers from submitting requests for co-operative advertising support, which precluded knowledge sharing about improving network advertising. Poor management of the lead allocations processes meant that network members were sent leads with poor quality information, precluding learning about customer needs and preferences. Incongruence between Aurora's marketing assistance and Preferred Suppliers business practices mediated the sharing of knowledge when members perceived that Aurora's ideas were "too fancy" for their firms to use. Future studies could explore whether such conditions also mediate knowledge sharing in other networks.

REFERENCES

Anand, B. N. and Khanna, T. (2000) 'Do firms learn to create value? The case of alliances', *Strategic Management Journal*, Vol. 21, No. 3, pp. 295-316.

Argyris, C. and Schon, D. A. (1978) *Organizational learning: a theory of action perspective,* Reading: Addison-Wesley.

Arino, A. and de la Torre, J. (1998) 'Learning from failure: Towards an evolutionary model of collaborative ventures', *Organization Science*, Vol. 9 No. 3, pp. 306-325.

Barr, P. S., Stimpert, J. L. and Huff, A. S. (1992) 'Cognitive change, strategic action, and organizational renewal', *Strategic Management Journal*, Vol. 13 (Summer Special issue), pp. 15-36.

Becerra, M., Lunnan, R. and Huemer, L. (2008) 'Trustworthiness, Risk, and the Transfer of Tacit Explicit Knowledge Between Alliance Partners', *Journal of Management Studies, Vol.* 45 No 4, pp 691-713.

Buchel, B. (2000) "Framework of joint venture development: Theory-building through qualitative research', *Journal of Management Studies*, Vol. 37, No. 5, pp. 637-661.

Buchel, B. (2002) 'Joint venture development: Driving forces towards equilibrium', *Journal of World Business,* Vol. 37, No. 3, pp. 199-207.

Cavana, R. Y., Delahaye, B. L. and Sekaran, U. (2001) *Applied business research: Qualitative and quantitative methods.* Brisbane: Wiley.

D'Aunno, T. A. and Zuckerman, H. S. (1987) 'A life-cycle model of organizational federations: The case of hospitals', *Academy of Management Review*, Vol. 12, No. 3, pp. 534-545.

Doz, Y. L. (1996) 'The evolution of cooperation in strategic alliances: Initial conditions or learning processes?' *Strategic Management Journal,* Vol. 17, No. 1, pp. 55-83.

Dussauge, P., Garrette, B. and Mitchell, W. (2000) 'Learning from competing partners: outcomes and durations of scale and link alliances in Europe, North America and Asia', *Strategic Management Journal*, Vol. 21, No. 2, pp. 99-126.

Dyer, J. H. and Nobeoka, K. (2000) 'Creating and managing a high-performance knowledge-sharing network: The Toyota case', *Strategic Management Journal,* Vol. 21, No. 3, pp. 345- 367.

Easterby-Smith, M., Lyles M.A. and Tsang, E.W.K. (2008). 'Inter-organizational knowledge transfer: current themes and future projects', *Journal of Management Studies*, Vol. 45, No. 4, pp. 677-690.

Eisenhardt, K. M. and Martin, J. A. (2000) 'Dynamic capabilities: What are they?' *Strategic Management Journal*, Vol. 21, No. 10/11, pp 1105-1121.

Fiol, C. M. and Lyles, M. A. (1985) 'Organisational learning', *Academy of Management Review*, Vol. 10, No. 4, pp. 803-813.

Grant, R. (1996) 'Prospering in dynamically-competitive environments: organizational capability as knowledge integration', *Organization Science*, Vol. 7, No. 4, pp 375-387.

Gulati, R. and Singh, H. (1998) 'The architecture of cooperation: Managing coordination costs and appropriation concerns in strategic alliances', *Administrative Science Quarterly*, Vol. 43, No. 4, pp. 781-814.

Hamel, G. (1991) 'Competition for competence and inter-partner learning within international strategic alliances', *Strategic Management Journal*, Vol. 12 (Summer Special Issue, pp. 83-103.

Hamel, G., Doz, Y. and Prahalad, C. K. (1989) 'Collaborate with your competitors and win', *Harvard Business Review*, Vol. 67, No. 1, pp. 133-139.

Harryson, S.J., Dudkowski R and Stern, A. (2008) 'Transformation Networks in Innovation Alliances – The Development of Volvo C70. *Journal of Management Studies*, Vol. 45 No. 4, pp. 745-773.

Heimeriks, K. H. and Duysters, G. (2007) 'Alliance capability as a mediator between experience and alliance performance: An empirical investigation into the alliance capability development process', *Journal of Management Studies*, Vol. 44, No. 1, pp. 25-49.

Hydro Electric Commission. (1993a) *HEC Preferred Supplier Code of Practice*, Hobart: Hydro Electric Commission.

Hydro Electric Commission. (1993b) *HEC Preferred Supplier Kit*. Hobart: Hydro Electric Commission.

Hydro Electric Commission. (1993c) *HEC Preferred Supplier – Making It Easy For You* [pamphlet]. Hobart: Hydro Electric Commission.

Hydro Electric Commission. (1993d) *HEC Preferred Supplier Scheme Procedures*. Hobart: Hydro Electric Commission.

Hydro Electric Commission. (1996) *Hydro Electric Commission Annual Report 1995-1996*. Hobart: Hydro Electric Commission.

Hydro Electric Commission. (1998a) *New Generation Hydro Preferred Supplier Staff Standards: Hydro Approved Dealer*. Hobart: Hydro Electric Corporation.

Hydro Electric Commission. (1998b) *New Generation Hydro Preferred Supplier Staff Standards: Hydro Authorised Dealer.* Hobart: Hydro Electric Corporation.

Hydro Electric Commission. (1998c) *New Generation Hydro Preferred Supplier Staff Standards: Hydro Authorised Electrical Contractor*. Hobart: Hydro Electric Corporation.

Kale, P., Dyer, J. H. and Singh, H. (2002) 'Alliance capability, stock market response and long term alliance success: The role of the alliance function', *Strategic Management Journal,* Vol. 23, pp. 747-767.

Kale, P. And Singh, H. (2007) 'Building firm capabilities through learning: The role of the alliance learning process in alliance capability and firm-level alliance success' *Strategic Management Journal*, Vol. 28, No. 10, pp 981-1000.

Kolb, D. A. (1984) *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs: Prentice-Hall.

Kumar, R. and Nti, K. O. (1998) 'Differential learning and interaction in alliance dynamics: A process and outcome discrepancy model', *Organization Science*, Vol. 9, No. 3, pp. 356-367.

Laamanen, T. and Walkin, J. (2009) 'Cognitive dynamics of capability paths', *Journal of Management Studies*, Vol. 46, No. 6, pp 950-981.

Lakhal, S., Martel, A., Oral, M. and Montreuil, B. (1999) 'Network companies and competitiveness: A framework for analysis', *European Journal of Operational Research*, Vol. 118, No 2, pp 278-294.

Laszlo, E. (1972) *Introduction to systems philosophy*. New York: Gordon and Breach.

Lembo, J. M. (1972) *When learning happens*. New York: Schocken Books.

McCutchen, W. W., Swamidass, P.M. and Teng, B. S. (2004) 'R&D risk-taking in strategic alliances: New explanations for R&D alliances in the biopharmaceutical industry', *Management International Review*, Vol. 44, No. 1, pp. 53-67.

McMurray, A. J., Pace, R. W. and Scott, D. (2005) *Research: A commonsense approach*. Melbourne: Thomson.

Makadok, R. (2001) 'Toward a synthesis of the resource-based and dynamic capability views of rent creation', *Strategic Management Journal*, Vol. 22, No. 5, pp 387-401.

Mazengarb Leo-Burnett. (2000) *How to make your advertising work*. Hobart: Mazengarb Leo-Burnett.

Merriam, S. B. (2002) Assessing and evaluating qualitative research. In S. B. Merriam and Associates (Eds.), *Qualitative research in practice*: 18-35. San Francisco: Jossey-Bass.

Mohr, J. J. & Sengupta, S. (2002) 'Managing the paradox of inter-firm learning: The role of governance mechanisms', *The Journal of Business & Industrial Marketing,* Vol. 17, No. 4, pp 282-201.

Pangarkar, N. (2003) 'Determinants of alliance duration in uncertain environments: The case of the biotechnology sector', *Long Range Planning*, Vol. 36, No. 3, pp. 269-284.

Pérez-Nordtvedt, L., Kedia, B.L., Datta, D.K. and Rasheed, A.A. (2008) "Effectiveness and Efficiency of Cross-Border Knowledge Transfer: An Empirical Examination', *Journal of Management Studies,* Vol. 45, No. 4, pp. 717-744.

Reuer, J. J., Zollo, M. and Singh, H. (2002) Post-formation dynamics in strategic alliances', *Strategic Management Journal*, Vol. 23, No. 2, pp. 135-151.

Ring, P. S. and Van de Ven, A. H. (1994) 'Developmental processes of cooperative interorganizational relationships', *Academy of Management Review,* Vol. 19, No. 1, pp. 90- 118.

Sampson, R. C. (2005) 'Experience effects and collaborative returns in R & D alliances', *Strategic Management Journal*, Vol. 26, No. 11, pp. 987-108.

Senge, P. M. (1990) *The fifth discipline: The art and practice of the learning organisation.* Sydney: Random House.

Shrader, R. C. (2001) 'Collaboration and performance in foreign markets: The case of young high-technology manufacturing firms', *Academy of Management Journal*, Vol. 44, No. 1, pp. 45-60.

Shrivastava, P. (1983) 'A typology of organizational learning systems', *Journal of Management Studies*, Vol. 20, No. 1, pp. 7-28.

Snow, C. C. and Thomas, J. B. (1993) 'Building networks', In Lorange, P., Chakravarthy, B., Roos, J. and Van de Ven A. H (eds.), *Implementing strategic processes: change, learning and co-operation,* (pp. 217-238), Oxford: Blackwell Business.

Teece, D. J., Pisano, G. and Shuen, A. (1997) 'Dynamic capabilities and strategic management', *Strategic Management Journal*, Vol. 18, No 7, pp 509-533.

Tsang, E.W. K. (1999) 'A preliminary typology of learning in international strategic alliances', *Journal of World Business*, Vol. 34, No. 3, pp. 211-229.

Van de Ven A. H. and Walker, G. (1984) 'The dynamics of interorganizational coordination', *Administrative Science Quarterly*, Vol. 29, No. 4, 598-621.

Veal, A. J. (2005) *Business research methods: A managerial approach* (2nd ed.). Frenchs Forest: Pearson.

Weick, K. E. and Boughton, M. (1986) 'Organizations as cognitive maps: Charting ways to success and failure' . In Sims, H. P., Gioia D. A. and Associates (eds.), *The Thinking Organization,* (pp. 95-120). Jossey-Bass: San Francisco.

Zajac, E. J and Olsen, C. P. (1993) 'From transaction cost to transactional value analysis: Implications for the study of interorganizational strategies', *Journal of Management Studies*, Vol. 30, No. 1, pp 131-145.