

行政院國家科學委員會專題研究計畫 成果報告

以資源基礎觀點探討吸收能力、資源配置與因果模糊性對 聯盟績效之影響 研究成果報告(精簡版)

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計畫主持人：黃靖文

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報告附件：出席國際會議研究心得報告及發表論文

處理方式：本計畫涉及專利或其他智慧財產權，2年後可公開查詢

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行政院國家科學委員會補助專題研究計畫 ☒ 成果報告 ☐ 期中進度報告

以資源基礎觀點探討吸收能力、資源配置與因果模糊性對聯盟績效之影響

計畫類別：☒ 個別型計畫 ☐ 整合型計畫

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執行單位：嘉南藥理科技大學資訊管理系

中 華 民 國 97 年 10 月 30 日

吸收能力、資源配置與因果模糊性對聯盟績效影響之研究

The Influence of Absorptive Capacity, Resource Alignment, and Causal Ambiguity on Alliance Performance

中文摘要

策略聯盟為公司學習與取得組織外界知識資源的重要機制之一，先前的研究關注於策略聯盟夥伴之間的知識移轉議題。本研究整合先前研究的觀點，透過文獻回顧發展出一研究架構來界定主要的決定因素，並檢視吸收能力、資源配置、因果模糊性、與聯盟績效之間的關聯性。本研究的母體是以中華徵信所公布的 5000 大企業為主要調查對象，以分層隨機抽樣的方式，以每一千家公司為分層，各層隨機抽出 100 家公司，共 500 家公司為樣本。本研究以敘述性統計、因素分析、信度分析與多元迴歸分析來驗證所提出之假設。

本研究主要發現如下：首先，迴歸分析結果顯示吸收能力、資源配置、因果模糊性、與聯盟績效之間有顯著的關係；其次，實證結果支持吸收能力與聯盟績效之間關係的強度會受到因果模糊性之干擾效果所影響；第三，因果模糊性在資源配置與聯盟績效之間的關係亦扮演干擾調節的角色。

關鍵字：吸收能力、資源配置、因果模糊性、聯盟績效

Abstract

Strategic alliances are a critical mechanism for a firm to learn and acquire knowledge resources outside the boundaries. Previous research has paid attentions to knowledge transfer between alliance partners. Synthesizing insights from prior research, this study develops a framework through literature review to identify the key determinants and examine the interrelationships between absorptive capacity, resource alignment, causal ambiguity, and alliance performance. The population for this study is the top 5000 Taiwanese firms listed in the China Credit Information Service Incorporation. A stratified random sampling method is used to select 100 firms in each of the five 1000 levels. The statistical analysis methods including descriptive statistic analysis, factor analysis, reliability analysis, and multiple regression analysis are used to test the hypotheses.

The major findings of this study include: firstly, the results of regression analyses show the significant relationships between absorptive capacity, resource alignment, causal ambiguity, and alliance performance. Secondly, the empirical results support that the strength of the relationship between absorptive capacity and alliance performance may be moderated by causal ambiguity. Thirdly, the relationship between resource alignment and alliance performance may vary depending on the intensity of causal ambiguity.

Keywords: absorptive capacity, resource alignment, causal ambiguity, alliance performance

1. Research Motivation and Objectives

Strategic alliances are an increasingly popular strategy in an age characterized by blurring industry boundaries, fast-changing technologies, and global integration (Das & Teng, 2003). Alliances and partnership are critical mechanisms for a company to gain access to other firms' valuable knowledge and resources. It appears strategically important for firms to transfer knowledge from alliance partners to sustain competitive advantages in competitive business environment. (Nonaka, 1994). Knowledge transfer between partners provides opportunities for mutual learning and interfirm cooperation that stimulate the creation and application of new knowledge (Tsai, 2001). In the process of knowledge transfer, firms with better absorptive capacity can learn and acquire knowledge more effectively to complement its own internal capabilities and resources (Lane, Salk, & Lyles, 2001). Higher levels of absorptive capacity help firms to integrate knowledge from different partners and contribute to a firm's innovation ability, business operations improvement, and further achieve desired results of knowledge transfer (Tsai, 2001; Lane et al., 2001; Chen, 2004).

Besides absorptive capacity, partner analysis literatures emphasize the desirability of a match between the partners, mainly in terms of their resource profiles. Alliance partners can create value of firms' resources by contributing similar resources and utilizing resources to the full potential (Das & Teng, 2002). Lack of similarity in resource and competencies raises barriers and challenges for interfirm communication and cooperation (Simonin, 1999). The dissimilarity between partners results in decreased learning and interaction (Szulanski, 1996; Simonin, 1999), and inhibits the ability of a firm to share, transfer, and leverage knowledge resources from partnership (Reagans & McEvily, 2003; Das & Teng, 2003; Murray & Kotabe, 2005). Thus, inter-partner resource alignment matters greatly to the alliance's effectiveness.

Although absorptive capacity and resource alignment are important for firms to transfer knowledge in alliances (Szulanski, 1996; Tsai, 2001; Chen, 2004; Das & Teng, 2002; Das & Teng, 2003; Murray & Kotabe, 2005), the linkage between absorptive capacity, resource alignment, and alliance performance may be more complicated. The resource-based theory suggests knowledge resources are valuable assets for competitive advantages because they are deeply rooted in the context of the organization and cannot be explicitly articulated and imitated (Nonaka, 1994; Grant, 1996). Due to the characteristics of scarceness, inimitability, and tacitness, knowledge is causally ambiguous and not easily transferred outside firm's boundaries (Grant, 1996; Szulanski, 1996). Casual ambiguity concerns the link between firm resources and sustainable competitive advantages (Reed & DeFillippi, 1990), and it may generate the conditions that either would foster or diminish the transition process in alliances from knowledge absorption to knowledge application in the form of new products and services (Szulanski et al., 2004). However, little empirical evidence has been provided to the potential influence of casual ambiguity on these associations.

Accordingly, the main purpose of this study is to examine the relationship between absorptive capacity, resource alignment, causal ambiguity, and alliance performance. This study further examines the moderating effects of casual ambiguity on the associations of absorptive capacity, resource alignment, and alliance performance.

2. Literature Review

2.1 Absorptive Capacity

Absorptive capacity refers to the ability to assimilate and replicate new knowledge gained from external sources. Szulanski (1996) found that lack of absorptive capacity was a major barrier to internal knowledge transfer within the firm. Thus, absorptive capacity facilitates firms to learn or transfer knowledge from outside more effectively. Tsai (2001) examined the effectiveness of interunit learning and knowledge transfer in petrochemical and food-manufacturing companies and suggested that absorptive capacity has significant and positive effect on business unit innovation and performance. When firms establish strategic alliances for transferring knowledge from their partners, they can develop absorptive capacity to assimilate and apply new knowledge from other firms to help their innovative activities, and further improve business operations and achieve favorable performance (Chen, 2004; Tsai, 2001; Lane et al., 2001). Accordingly, the following hypothesis is proposed.

H1: Absorptive capacity will be positively related to alliance performance.

2.2 Resource Alignment

Resource alignment refers to the pattern that the resources of partners are matched and integrated in an alliance (Das & Teng, 2000). Each partner will contribute resources to the alliance. The criterion for partner selection in alliances is the fit between one organization's resource needs and another's resource provision (Seabright, Levinthal, & Fichman, 1992). Thus, inter-partner resource alignment plays a critical role in knowledge transfer. Alliance partners with similar resources and compatible business practices increase their ability to work jointly and effectively (Das & Teng, 2002; Das & Teng, 2003). They can better align to transfer knowledge across organizational boundaries and exhibit the higher levels of knowledge acquisition (Simonin, 1999; Das & Teng, 2000). When resources contributed by the partners are more compatible and fully utilized, partner can realize economies of scale and avoidance of wasteful duplication, thus facilitating to achieve the goals of the alliance (Das & Teng, 2000; Das & Teng, 2003; Murray & Kotabe, 2005). According to the above, the following hypothesis is proposed.

H2: Resource alignment will be positively related to alliance performance.

2.3 Causal Ambiguity

Based on the resource-based view, the knowledge and competencies are valuable assets of firms for competitive advantages (Grant, 1996; Simonin, 1999). Several knowledge characteristics such as scarceness, tacitness, and imperfectly imitability generate causal ambiguity in competency-based advantage (Reed & DeFillippi, 1990). Causal ambiguity concerns the nature of the causal connections between actions and results and relates to the extent of uncertain imitability and the degree of tacitness of the practice (Szulanski et al., 2004). As Zander and Kogut (1995) argued, tacitness increased ambiguity that significantly influences the speed of the transfer of manufacturing capabilities. Szulanski (1996) suggested that the characteristics of causal ambiguity obstruct the transfer of best practices within the organization. Likewise,

Simonin (2004) found that ambiguity acts as an impediment on knowledge transfer between international strategic alliances. Thus, causal ambiguity in skill and resource deployment protects a firm's competencies from imitation among competitors and within the firm (Reed & DeFillippi, 1990; Szulanski, 1996; Simonin, 2004). Thus, the following hypothesis is proposed.

H3: Causal ambiguity will be negatively related to alliance performance.

2.4 The Moderating Effects of Causal Ambiguity

In the process of knowledge transfer in strategic alliances, the positive effect of absorptive capacity on alliance performance may be contingent upon the extent of causal ambiguity. For resource-based theory, knowledge is tacit, specific and highly personal. It is not easy to translate into collective organizational knowledge (Nonaka, 1994; Szulanski, 1996) and to imitate by competitors (Grant, 1996). The casually ambiguous nature of knowledge increases potential gap between prevailing shared beliefs and the actual work practices, thus limiting the depth of understanding and knowledge absorption between alliance partners (Szulanski et al., 2004). As Reed and DeFillippi (1990) argued, the existence of ambiguity makes managers not understand causal relationships and not utilize competencies for advantage. Szulanski et al. (2004) also found that causal ambiguity delineates the conditions as to when and how a recipient's perception of the trustworthiness of a source affects the effectiveness of intrafirm knowledge transfer. Accordingly, the above statements suggest that the previous hypothesized relationship between absorptive capacity and alliance performance is likely to be moderated by causal ambiguity. The following hypothesis is developed.

H4: Casual ambiguity will negatively moderate the effect of absorptive capacity on alliance performance.

While resource similarity and resource utilization would facilitate the effectiveness of knowledge transfer (Das & Teng, 2000; Murray & Kotabe, 2005), the relationship between resource alignment of partners and alliance performance may vary depending on the degree of causal ambiguity. Causal ambiguity increases barriers to prevent partner firms from replicating their partners' knowledge (Das & Teng, 2003). When the ambiguity associated with a partner's knowledge and resource is high, firms face difficulty to contribute and align resources for improved performance in alliance. However, when causal ambiguity is low, firms can gain the favorable alliance performance from inter-partner knowledge acquisition and resource alignment. Accordingly, the positive impact of resource alignment on alliance performance would become attenuate if there is a higher level of causal ambiguity. Thus, the following hypothesis is developed.

H5: Causal ambiguity will negatively moderate the effect of resource alignment on alliance performance.

3. Research Design and Methodology

The first issue of this study is to examine the direct effect of absorptive capacity, resource alignment, and causal ambiguity on alliance performance. The second issue is to investigate whether causal ambiguity will play the moderating role in the relationship between absorptive capacity and alliance performance. The third issue is to examine whether the effect of resource alignment on alliance performance will be moderated by causal ambiguity.

For the purposes of this study, four major constructs including absorptive capacity, resource alignment, causal ambiguity, and alliance performance, are operationalized in this study. To enhance reliability, multiple-item scales are designed to measure the multifaceted nature of each of the above constructs except for the basic characteristics of the respondent and the firm. Seven-point Likert scales are developed to measure the opinions of respondents.

The population in this study is the top 5,000 Taiwanese firms listed in the China Credit Information Service Incorporation. A random stratified sampling method was used to select 100 firms in each of the five 1,000 levels. A questionnaire then mailed to the 500 companies, along with a cover page that explained the nature of the study. Follow-up letters and phone calls were done two weeks later to appeal for participation.

To achieve the research purposes and test the hypotheses, this empirical study applies the software of SPSS to analyze the collected data. This study conducts the following data analysis: descriptive statistic analysis, factor analysis, reliability analysis, and multiple regression analysis.

4. Discussion and Conclusions

The aim of this study is to advance our understanding of the process of knowledge transfer in strategic alliances. Firstly, our results indicate that absorptive capacity and resource alignment are positively related to alliance performance. Causal ambiguity is negatively related to alliance performance. Secondly, the strength of the relationship between absorptive capacity and alliance performance is moderated by causal ambiguity. Thirdly, the relationship between resource alignment and alliance performance depends on the intensity of causal ambiguity.

This study has some limitations. The first limitation is the use of a cross-sectional research design. The second limitation concerns the response rate. Thirdly, the study is based on self-report data incurring the possibility of common method bias. Fourthly, this study was done by empirically investigating Taiwanese firms. Potential cultural limitation should be noted.

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出席國際學術會議心得報告

計畫編號	NSC-96-2416-H-041-004
計畫名稱	以資源基礎觀點探討吸收能力、資源配置與因果模糊性對聯盟績效之影響
出國人員姓名 服務機關及職稱	黃靖文 嘉南藥理科技大學資訊管理系助理教授
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會議名稱	(中文)美國管理學會 2008 年度會議 (英文) Academy of Management 2008 Annual Meeting
發表論文題目	(中文)知識創造對於創業導向與公司績效的中介效果 (英文) The Mediating Effect of Knowledge Creation on Entrepreneurial Orientation and Firm Performance
	(中文)人力資源實務與創新績效之知識的管理 (英文) Managing Knowledge in Human Resource Practices and Innovation Performance

一、參加會議經過

美國管理學會(The Academy of Management, AOM)為管理學領域極具聲望的學術組織，今年2008年的年度會議的主題是「The Questions We Ask」。此次會議共有來自83個國家，並超過7000位學者共同參與。

本人於97年8月7日下午由桃園國際機場起飛，經過十幾小時的飛行，抵達美國洛杉磯國際機場。研討會期間為97年8月8日至13日，本人除了自身有二篇論文發表之外，亦積極參與AOM所舉辦的其他各場次論文發表，收集相關資料，聽取相關領域學者之研究方向與新近之研究趨勢。

本人第一篇研究論文發表時間為8月12日上午10點30到11點50分，發表地點在Anaheim國際會議中心，發表的場次為ENT Session，所屬的paper session為「Corporate Entrepreneurship, Entrepreneurial Orientation and Innovation」，本篇論文主題為「The Mediating Effect of Knowledge Creation on Entrepreneurial Orientation and Firm Performance」；第二篇研究論文發表時間在8月12日下午2點30到3點50分，發表的場次為TIM Session，所屬的paper session為「Disciplinary Focused and Human Resource Management Visual Papers」，本篇論文主題為「Managing Knowledge in Human Resource Practices and Innovation Performance」。這兩篇文章是由本人進行論文的張貼，並與其他學者進行互動式的討論。

二、與會心得

本人此次參與由美國管理學會所舉辦的2008年年度會議的過程，在個人研究主題、未來學術研究以及國際觀等方面獲益良多。本人二篇論文經由張貼發表與互動討論之後，不僅讓外國學者能進一步瞭解本論文所探討之議題，與會的其他學者亦提出了一些建議與想法，有助於強化本論文之內容，並獲得許多的啟發。觀摩同一場次其他學者的文章，使本人對於「Entrepreneurship」、「Human Resource Management」等研究範疇有更多的了解。

另一方面，藉由聆聽不同的主題，使本人能夠吸收新近的研究趨勢，延伸研究的觸角。在參與研討會的期間，與其他來自世界各國學者交流，亦開拓了個人的國際視野及人脈，這些是在往後研究中所不可或缺的。

三、建議

本人十分感謝國科會對於本次國際會議費用的補助，亦感謝本校相關單位之大力協助，才使這次的論文發表順利而圓滿。多參與國際學術會議有助於提昇國內學術研究之水準，而且個人在參與研討會的過程中，從聽取其他學者的研究，能使個人獲得相當多的經驗及資訊。因此，本人非常肯定及感謝國科會對於國內學者出國參與會議的補助，此項補助可讓國內之研究學者能夠更快速掌握國際學術之動向，更有助於鼓勵臺灣學者參與國際會議與提升學術研究水準。

四、攜回資料名稱及內容

1. 會議大會手冊：內容包括會議各項須知、各場次的時間地點與主題，及與會者的身份索引
2. 會議論文集光碟片：內容為各論文之摘要