Maker-buyer strategic alliances: an integrated framework

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Abstract
Purpose – Although existing partial theories contribute to scholarly understanding of strategic alliances, the lack of a comprehensive framework to explain strategic alliances is unfortunate. The purpose of this paper is to develop an integrated framework for maker-buyer strategic alliance performance.

Design/methodology/approach – Drawing on the concept of embeddedness developed by Granovetter, this paper argues that maker-buyer alliances are economic actions intended to pursue synergies; meanwhile, these economic actions are embedded in social contexts.

Findings – This paper argues that the economic goal of firms entering alliances is to combine their complementary resources to create synergies. To achieve this goal, managers must efficiently manage the economic problems associated with such alliances, including searching for partners with complementary resources, allocating value-added activities correctly, establishing efficient interorganizational routines, and introducing proper governance structures. Furthermore, alliances are embedded in their social contexts. Firms are constrained by their specific social environments and behave accordingly, impacting their performance. It is difficult for firms to modify the contexts in which they are embedded without strong strategic intent. The social contexts in which firms are embedded may also be sources of sustainable competitive advantage or disadvantage.

Research limitations/implications – Several managerial implications and future research directions are presented.

Originality/value – This study, by integrating economic and sociological theories into a framework and focusing on maker-buyer alliances, depicts not only the full picture but also the necessary details of maker-buyer alliances for scholars and practical managers.

Keywords Supplier relations, Strategic alliances, Transaction costs, Taiwan

Paper type Research paper

An executive summary for managers and executive readers can be found at the end of this article.

Introduction

This study develops an integrated framework for the performance of maker-buyer strategic alliances. Drawing on the embeddedness concepts of Granovetter (1985, 1992) and other scholars, we argue that maker-buyer alliances are economic actions undertaken to pursue synergies; meanwhile, these economic actions are embedded in their unique social contexts. Past studies that have focused on either economic aspects (Subramani and Venkatraman, 2003; Espino-Rodrı´ guez and Padrón-Robaina, 2006; Zollo et al., 2002; Das and Teng, 2000; Combs and Ketchen, 1999; Joskow, 1987; Reuer and Arino, 2007; Wang and Zajac, 2007) or social aspects (Dacin et al., 2007; Garcia-Pont and Nohria, 2002; Podolny, 1994; Koka and Prescott, 2002; Gulati, 1995; Gulati and Gargiulo, 1999; Uzzi, 1996; 1997; Xia et al., 2008) of strategic alliances have developed only partial theories that do not fully describe the complexity of strategic alliances. By contrast, the current study constructs an integrated framework that synthesizes economic perspectives, including transaction costs economics and the resource-based view, and social perspectives, including social networks and institutionalism, to fully explain maker-buyer strategic alliances and their performance. Although some earlier studies have drawn on both perspectives, they do not depict the relationships among explanatory constructs of both perspectives (Dyer and Singh, 1998; Gulati, 1998; Dyer, 1997; Dyer and Chu, 2003; Chung et al., 2000). The framework of this study also addresses this problem.

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practitioners cannot gain a complete picture of alliances to guide their decisions.

Although a few integrated models of strategic alliances have been proposed (e.g. Borys and Jemison, 1989; Wilson, 1995; Oliver, 1990; Varadarajan and Cunningham, 1995; Sheth and Parvatiyar, 1992; Dwyer et al., 1987; Child and Faulkner, 1998), the framework presented in this study adds much to the knowledge of maker-buyer strategic alliances. First, this study integrates both sociological and economic theories into a framework, arguing that strategic alliances are economic activities that are also embedded in their social contexts. Much of the research that has tried to establish integrated models of strategic alliances has neglected the social contexts in which the alliances are embedded. Yet, as this study proposes later, social contexts significantly influence alliance activities and may be sources of sustainable competitive advantages or disadvantages. Second, this study focuses on one specific alliance, maker-buyer strategic alliances, in order to discuss strategic alliances in greater detail. Some of the existing research attempted to establish general theories for strategic alliances rather than for more specific types of strategic alliances. Though helpful for conceptual understanding, a general theory for all types of strategic alliances would be so broad that detailed discussions would be impossible. To achieve the necessary level of detail, this study focuses only on maker-buyer strategic alliances. By integrating economic and social perspectives into a framework and focusing on maker-buyer alliances, illustrated with examples such as relationships between Taiwanese manufacturers and international buyers, this study helps scholars and practitioners to see not only the big picture, but also the unique details of maker-buyer strategic alliances.

The framework

A strategic alliance is an ongoing, formal business relationship between two or more independent organizations established with the purpose of achieving common goals (Sheth and Parvatiyar, 1992). It is a relatively enduring inter-firm cooperative arrangement, involving flows and linkages that use resources and/or governance structures from autonomous organizations to jointly accomplish individual goals linked to the corporate mission of each sponsoring firm (Parkhe, 1993). A strategic alliance can also be defined as any voluntarily initiated cooperative agreement between firms that involves exchange, sharing, or co-development, and can include partner contributions of capital, technology, or firm-specific assets (Gulati, 1998; Gulati and Singh, 1998). In Williamson’s (1985) words, strategic alliances are bilateral or hybrid governance structures that govern transactions. They do not rely on either arm’s-length market relationships or hierarchical structures to govern exchanges between parties. Strategic alliances are more enduring than arm’s-length market relationships and introduce governance mechanisms other than price; moreover, they are not hierarchical relationship because parties entering into alliances remain independent firms.

Maker-buyer agreements between Taiwanese manufacturers and international buyers are generally strategic alliances rather than arm’s-length market agreements, in that they involve the exchange of capabilities of both firms within a longer cooperation horizon than arm’s-length agreements, and given that the agreements are more complex and require more coordination (Borys and Jemison, 1989). Maker-buyer agreements between Taiwanese manufacturers and their buyers are not hierarchical relationship, either, because the exchange and sharing of resources are not completed within a single firm.

As shown in Figure 1, we will discuss the economic goal of maker-buyer strategic alliances, major economic problems in achieving this goal, and the social contexts in which those economic activities embedded. As shown in the bottom level of Figure 1, this study argues that firms entering into maker-buyer alliances have the economic goal of combining their complementary resources to create synergies. To achieve this goal, managers must effectively and efficiently manage economic problems associated with alliances. Drawing on economic perspectives of alliances, such as the resource-based view (RBV) and transaction cost economics (TCE), this study identifies four major economic challenges to firms entering into maker-buyer alliances, including the search for partners that possess complementary resources, allocating value-added activities correctly, establishing efficient interorganizational routines, and introducing proper governance structures, as depicted in the middle level of Figure 1. Furthermore, this study argues that alliance-related economic activities are not managed in a vacuum, but rather are embedded in their social contexts. Firms are constrained by their specific social environments and behave accordingly, impacting their performance. Firms that behave similarly will not perform similarly if they are embedded in different contexts. Drawing on network theory and institutionalism, this study identifies three relevant contexts in which alliances between manufacturing firms and their buyers are embedded: structural embeddedness, relational embeddedness, and other types of institutional embeddedness, as demonstrated in the upper level of Figure 1. Despite being constrained by embeddedness, firms can also modify the contexts in which they are embedded; in turn, these modified contexts may become sources of competitive advantage (Dacin et al., 1999; Gulati et al., 2000). However, as argued later, it is a difficult task to modify the social contexts in which alliances are embedded.

Although various theoretical frameworks have been used in studying buyer-supplier alliances, they focused either on economic aspects (such as TCE and the RBV) or social aspects (such as institutionalism and network theory). There have been few attempts to synthesize these two aspects, but a few examples include Gulati et al. (2000), Dyer and Singh (1998), and Gulati (1998). In Granovetter’s (1985, 1992) words, research that focuses only on economic aspects of buyer-supplier alliances are “undersocialized” or “atomized,” in that alliance decisions are viewed in vacuum and as unaffected by the social contexts in which they are embedded. On the other hand, research that focuses only on social aspects are “oversocialized,” treating people and firms as passive, compliant, and completely manipulated by the social environment. Neither undersocialization nor oversocialization is an accurate view. Granovetter (1985, p. 487) thus argued: “[Economic actors’] attempts at purposive action are instead embedded in concrete, ongoing systems of social relation”. This study adopts Granovetter’s paradigm, arguing that alliances are purposeful activities undertaken to pursue the economic goal of synergy while at the same time being embedded in their social contexts. Consequently, to avoid both undersocialization and oversocialization, this study...
integrated economic and sociological theories into a framework, which is rare in the extant literature. Although Gulati et al. (2000), Dyer and Singh (1998), and Gulati (1998) drew on both economic and social perspectives, they did not attempt to establish comprehensive frameworks.

The economic goal of a strategic alliance

Maker-buyer alliances involve firms that share resources and capabilities along a value chain. According to Porter (1985), capabilities to conduct activities along a value chain are complementary. Furthermore, according to RBV, combining complementary resources and capabilities creates synergies (Das and Teng, 2000; King et al., 2003). Synergy arises when the value created by the joint production of two firms exceeds the sum of the value created by two independently operating firms (Das and Teng, 2000; Copeland and Weston, 1988). Synergy can also be described as:

\[ V_{AB} > V_A + V_B \]

\( V_{AB} \) denotes the value created by the joint production of two firms. \( V_A \) and \( V_B \) represent the value created independently by firm A and firm B, respectively. As an example, firms with manufacturing capabilities cannot succeed without accessing marketing capabilities. To succeed, they must learn what products customers want to buy and through what channels to sell such products. Similarly, marketing firms cannot succeed without accessing the capability to produce products economically. Firm success requires a combination of these two capabilities. Generally, Dell, Hewlett-Packard, and other international buyers have marketing capability in the personal computing industry, while Taiwanese manufacturers have manufacturing capability in this industry. Today, 80 percent of laptop computers are manufactured by Taiwanese companies and marketed primarily by their international buyers, including Dell, Hewlett-Packard, and Apple (Hitt et al., 2007).

Manufacturing firms can combine resources by acquiring marketing capabilities through mergers and acquisitions or learning alliances (Barney, 1986; McEvily and Marcus, 2005; Wernerfelt, 1984; Wang and Zajac, 2007), but such methods are usually too expensive because of the bureaucracy that results from organizational growth and complexity (Williamson, 1985) and because flexibility decreases in such fast-changing markets (Buckley and Casson, 1998; Kogut, 1991). A strategic alliance is often a better alternative for manufacturing or marketing firms to access complementary resources because it allows them to retain market mechanisms and high-power incentives (Wang and Nicholas, 2007). For example, in 2004, Dell, Apple, and Gateway outsourced 100 percent of their manufacturing of laptop computers. By contrast, IBM outsourced only 40 percent of its laptop business, keeping 60 percent in house; it lost money and sold its laptop business to Lenovo, the leading Chinese PC company (Hitt et al., 2007). Previous studies have demonstrated that resource complementarity significantly impacts strategic alliance formation (Chung et al., 2000; Gulati and Gargiulo, 1999; Gulati, 1995; Kumar and Seth, 1998). Thus, we propose that:

**P1.** The goal of a maker-buyer strategic alliance is to combine the complementary resources of both parties to create synergies.

When synergies are created, they enhance alliance performance. However, relatively little research has examined alliance performance (Heide, 1994; Gulati, 1998; Zollo et al., 2002). One reason is that alliance performance is hard to define and measure. In a literature review, Gulati (1998) categorized the measurement of alliance performance into two units of analysis: firms and dyadic relationships. It is reasonable to believe that when synergies are created, not only

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**Figure 1** An integrated framework for maker-buyer strategic alliances

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will the performance of the relationship improve, but the performance of firms voluntarily entering into the alliance relationship will improve as well if governance mechanisms are properly devised to ensure that benefits are shared as planned. However, a major drawback of using firms as the unit of analysis is that the strategic alliance is only one of many factors that affect firm performance. It is difficult for researchers to isolate the effects of a strategic alliance on firm performance from other effects (Gulati, 1998). As a result, many researchers adopt dyadic relationships as the unit of analysis (Dyer and Singh, 1998; Zollo et al., 2002; Kotabe et al., 2003; Arino, 2003; Das and Teng, 2000), and we do in this study as well.

The unit of analysis of traditional financial indicators such as return on assets (ROA), return on equity (ROE), and Tobin’s q is firms rather than dyadic relationships; thus, these indicators may not be adequate for this study. Although alliance termination is based on dyadic relationships, many factors affect alliance termination. Notably, an alliance is likely to be terminated after its goals are achieved. Therefore, alliance termination is not a good measurement of alliance performance (Gulati, 1998; Arino, 2003). Recently, scholars have measured managers’ perceived satisfaction in the alliance as an indicator of alliance performance (Zollo et al., 2002; Poppo and Zenger, 1998, 2002; Ryu et al., 2008), which has proven more reliable and valid (Arino, 2003) and is suggested as an alliance performance measurement in this study. Specifically, to measure manager perceived satisfaction as maker-buyer alliance performance indicators, this study identifies the following five questions:

1. Generally, I feel satisfied with the gross margin of the particular buyer’s orders.
2. The expected profit from the buyer’s orders has been achieved.
3. The buyer behaves opportunistically, so that our costs have increased or our prices are depressed.
4. Contracting and coordination with the buyer requires significant human and physical resources.
5. As a whole, I feel satisfied with the relationship with the buyer.

Economic problems in implementing strategic alliances

Synergy is not created simply by the decision to enter into an alliance. As shown in the middle level of Figure 1, a firm entering an alliance must find a partner with complementary resources, allocate value-added activities between itself and its partner, establish efficient interorganizational routines, and introduce proper governance mechanisms to guard against transaction hazards. We describe these economic problems respectively.

Allocating value-added activities

After finding partners with complementary resources, firms entering alliances face their first challenge: allocating value-added activities. In a value chain, value-added activities include branding, product decision, design, manufacturing, outbound logistics, marketing, and service. An original equipment manufacturing (OEM) contract is used when a manufacturing firm focuses entirely on manufacturing and the buyer is responsible for other activities, as in the alliances the Taiwan Semiconductor Manufacturing Company (TSMC) and United Microelectronics Corporation (UMC) established with their buyers. Meanwhile, when a manufacturing firm is responsible not only for manufacturing but also for product decision and design, an original design manufacturing (ODM) agreement is formed, as in alliances between Quanta and its buyers and Pou Chen and its buyers. An electronics manufacturing service (EMS) describes an agreement, such as alliances between Foxconn and its buyers, in which a manufacturing firm takes charge of manufacturing, outbound logistics, and service in the electronics industry, with design generally excluded. Meanwhile, own-brand manufacturing (OBM) indicates an agreement in which the manufacturer is in charge of branding, design, and manufacturing, with product decision and service possibly excluded, as in alliances Acer and BenQ established with their buyers.

To create synergies, value-added activities must be allocated based on the absolute advantages or relative capabilities (Espino-Rodriguez and Padrón-Robaina, 2006). Individual partners must focus on specific stages of the value chain where they can contribute most toward synergy creation given their distinctive capabilities (Varadarajan and Cunningham, 1995). For example, a manufacturing firm without a competitive brand entering into an OBM alliance will not be successful in the short term, although in the long term the firm can accumulate brand resources via OBM activities (Dierickx and Cool, 1989). As argued above, accumulating brand resources and then conducting OBM activities may not be a good alternative, because an organization becomes more complicated and less flexible when it integrates branding and manufacturing internally.

As Figure 1 indicates, the allocation of value-added activities moderates the effects of resource complementarity on synergies created. Even if two firms have complementary resources, their alliances will not create synergies if value-added activities are not allocated according to the firms’ relative capabilities, because they would not be contributing their complementary resources to the alliances. If a manufacturer with strong manufacturing capability but without a competitive brand name enters OBM alliances with a buyer that has a competitive brand name, synergies will not occur because the buyer is not contributing its complementary resource, i.e., its brand name.

P2. Allocating value-added activities according to firm absolute advantages or relative capabilities enhances the effects of resource complementarity on synergy creation.

Establishing efficient interorganizational routines

The second challenge for firms in alliances is to establish efficient interorganizational routines with their alliance partners. An interorganizational routine can be defined as a regular pattern of interorganizational interactions that permits the transfer, combination, or creation of products, components, parts, information, and knowledge (Grant, 1996). These interorganizational routines represent institutionalized processes and channels for combining the complementary resources of different firms to create synergies (Dyer and Singh, 1998; Zollo et al., 2002). Creating greater synergies requires establishing more efficient interorganizational routines or processes (Sheth and Parvatiyar, 1992). In an alliance between an automaker and a
seat supplier, the supplier may establish a factory near or far away from the automaker. Because transporting seats for a long distance is costly, establishing a factory near the automaker is a more efficient interorganizational routine (Dyer, 1997). When a factory near the automaker is built, seats can be delivered by either trucks or conveyor belts. Obviously, conveyor belts are more efficient (Dyer, 1997). An EMS manufacturer can either ship its products from an overseas factory or establish a hub near its buyer. In a fast-changing market, Inventec, a Taiwanese manufacturer, established hubs near buyers in Houston, Texas, and Inchinnan, Scotland – a more efficient interorganizational routine than shipping products from its factories in Taiwan or China. Similarly, to meet its 983 rule (which requires 98 percent of products to be delivered within three days), Mitac, another Taiwanese manufacturer, established 15 hubs in the UK, the USA, France, Belgium, China, and Japan. A just-in-time (JIT) system is also an efficient interorganizational routine, in that it significantly reduces inventory costs in the value chain (Subramani and Venkatraman, 2003).

Aside from physical product routines, efficient information and knowledge interorganizational routines are also crucial to create synergies, for two reasons. First, information and knowledge exchange facilitates product routines. Both EMS and JIT systems need intensive, real-time knowledge and information exchange between suppliers and buyers. Second, manufacturing firms and marketing firms have distinctive and complementary knowledge and information. Marketing firms have knowledge about market and customer needs; manufacturing firms have knowledge about cost structure and other supply-side conditions. When knowledge of marketing and manufacturing firms are combined and exchanged, firms can effectively respond to market or supply-side changes without the need for trial and error, significantly reducing the costs associated with forecasting errors (Uzzi, 1996, 1997). Despite the convenience of the Internet and other telecommunication technologies (such as TSMC’s eFoundry, a web-based application that allows customers to access critical information and interact with TSMC more actively in design, engineering, and logistics), face-to-face communication remains important. For instance, Nike assigns employees to communicate with its suppliers at both regular and irregular intervals. Toyota also sends its employees temporarily or permanently to communicate with suppliers (Dyer and Singh, 1998).

Because interorganizational routines are institutionalized processes and channels for combining complementary resources, they moderate the effects of resource complementarity on synergy creation, as depicted in Figure 1. Investment in efficient interorganizational routines facilitates combining complementary resources and thus increases the effects of resource complementarity on synergy creation.

**P3.** Investment in efficient interorganizational routines enhances the effects of resource complementarity on synergy creation.

**P3a.** Investment in efficient product interorganizational routines enhances the effects of resource complementarity on synergy creation.

**P3b.** Investment in efficient information/knowledge interorganizational routines enhances the effects of resource complementarity on synergy creation.
unpredictable supply-side shocks (e.g. avian influenza, milk contaminated with toxic chemicals, earthquakes, or war);
• behavioural uncertainty, or the degree to which a partner’s contribution or performance is unmeasurable;
• changes in competition, e.g. mergers of buyers such as Hewlett-Packard and Compaq; and
• regulation changes.

According to TCE, transaction frequency is the third dimension for describing transactions. Frequency is relevant in two respects: reputation effects and setup costs (Williamson, 1985, 2005). However, in maker-buyer alliances, transaction frequency is always controlled at a high level. Thus, this study does not discuss the effects of frequency further.

Introducing proper governance structures
Governance mechanisms must be developed to govern transaction hazards resulting from asset specificity and uncertainty. Because all governance mechanisms are imperfect, formal and informal mechanisms are generally employed simultaneously (Poppo and Zenger, 2002; Luo, 2002; Borys and Jemison, 1989). Formal mechanisms include formal contracts (Joskow, 1987; Reuer and Arino, 2007; Argyres and Mayer, 2007), mutual hostage arrangements (Joshi and Stump, 1999; Vazquez et al., 2007), and mutual stock holdings (Gulati and Singh, 1998; Oxley, 1997; Rowley et al., 2000; Gallick, 1984). Informal mechanisms include trust, information sharing, and joint problem-solving arrangements (Uzzi, 1996, 1997; Kale et al., 2000; Coleman, 1988; McEvily and Marcus, 2005).

When all future contingencies can be anticipated and contract provisions can be enforced without cost, formal contracts are perfect governance mechanisms that can cure transaction hazards without employing other mechanisms simultaneously. However, due to bounded rationality, not all future contingencies can be anticipated, and this problem becomes more serious when uncertainty increases (Wolter and Veloso, 2008; Williamson, 1985, 2005); meanwhile, contract provisions are difficult to enforce, owing to non-verifiability (Williamson, 2002). Moreover, obtaining court orders can be time consuming (Menard, 1994). As a result, formal contracts are imperfect governance mechanisms in the real world, and other mechanisms must be employed simultaneously to govern alliances effectively.

If both a buyer and a manufacturer invest in specific assets, their motivation to behave opportunistically will be neutralized (Joshi and Stump, 1999; Vazquez et al., 2007). “We found the product quality of our competitor was bad and its buyer was dissatisfied,” said one manager of AVer Media, a Taiwanese manufacturer. “We... contacted the buyer, hoping for an opportunity to cooperate with the buyer. However, the buyer told us: ‘We won’t replace our existing supplier, although we know that they are bad and you are good. We cannot afford the costs associated with establishing a new relationship.’” When a buyer has invested in specific assets, it becomes locked into the alliance relationship and cannot behave opportunistically.

When a firm holds stock issued by its alliance partner, its motivation to take advantage of the partner decreases because opportunistic behaviour would reduce the price of the stocks the firm holds (Gulati and Singh, 1998; Oxley, 1997; Rowley et al., 2000; Gallick, 1984). However, holding partner stock is also an imperfect governance mechanism, as the firm holds only a portion of the partner’s stocks; thus, opportunism cannot be fully governed. Holding partner stock also allows the firm to join the partner’s board of directors, gain information about the partner, and vote against partner decisions that would damage the firm (Williamson, 1985). Nevertheless, lacking major shares in the partner firm, influence on the partner would remain limited.

Trust, information transfer, and joint problem-solving are all important informal governance mechanisms (Uzzi, 1996, 1997; Kale et al., 2000; Coleman, 1988; McEvily and Marcus, 2005; Dyer and Singh, 1998; Dyer, 1997; Dyer and Chu, 2003; Reuer and Arino, 2007; Westphal et al., 2006). Because all formal governance mechanisms are imperfect, informal mechanisms emerge to lubricate alliance activities. Information asymmetry is required for opportunistic behaviour. If firms have perfect information, they can distinguish which partners are opportunistic and which are not, substantially reducing transaction hazards. Though obtaining perfect information is impossible, information sharing decreases perceived transaction hazards. Information sharing also promotes mutual understanding and trust (McEvily and Marcus, 2005; Tsai and Ghoshal, 1998) between alliance partners and thus reduces perceived transaction hazards. When a firm believes that a partner will not behave opportunistically and decides to cooperate with that partner, it is said that the firm trusts the partner (Luo, 2008). Trust is the decision to rely on another party under the condition of risk (Currall and Inkpen, 2002). Trust and information transfer also promote joint problem-solving (McEvily and Marcus, 2005; Tsai and Ghoshal, 1998), another governance mechanism (Zaheer and Venkatraman, 1995; Joshi and Stump, 1999; Subramani and Venkatraman, 2003). By engaging in joint problem-solving, a firm can obtain operational information about the partner and interfere in routines that could damage the firm, such as doing shoddy work or using inferior materials.

Because all of the governance mechanisms described above are imperfect, several mechanisms are introduced in an alliance relationship to better govern transaction hazards (Poppo and Zenger, 2002; Luo, 2002). The greater the transaction hazards caused by asset specificity, the greater the number of formal and informal governance mechanisms employed (Poppo and Zenger, 2002). Governance mechanisms employed must fit the degrees of asset specificity and transaction hazard; otherwise, uncontrolled transaction costs will erode the synergies created by combining complementary resources (Combs and Ketchen, 1999; Leiblein et al., 2002; Geyskens et al., 2006; Argyres and Mayer, 2007).

P5a. The use of formal and informal governance mechanisms increases with an increasing degree of asset specificity and transaction hazards.

P5b. The fit between governance mechanisms and transaction hazards is positively related to synergy creation.

Embeddedness problems in strategic alliances
According to Dacin et al. (1999), economic activities, such as strategic alliances, cannot be atomized, but rather are
embedded in a wider social structure. Zukin and DiMaggio (1990) proposed a wider definition of embeddedness that refers to the contingent nature of economic activity on cognition, culture, social structures, and political institutions. Granovetter (1985) narrowed his concept of embeddedness to describe the fact that purposive actions are embedded in concrete, ongoing systems of social relations, that is, social networks. Granovetter (1992) further categorized his concept of embeddedness into structural embeddedness and relational embeddedness. As Granovetter (1992, p. 33) argued:

“Embeddedness” refers to the fact that economic action and outcomes, like all social action and outcomes, are affected by actors’ dyadic (pairwise) relations and by structure of overall network of relations. As a shorthand, I will refer to these as the relational and the structural aspects of embeddedness. The structural aspect is especially crucial to keep in mind because it is easy to slip into “dyadic atomization,” a type of reductionism.

Nahapiet and Ghoshal (1998) and Inkpen and Tsang (2005) also adopt Granovetter’s typology. Drawing on these concepts of embeddedness from Granovetter and other scholars, this study identifies three categories of social contexts in which maker-buyer alliances are embedded: structural embeddedness, relational embeddedness, and institutional embeddedness, as depicted in the upper level of Figure 1.

**Structural embeddedness**

Structural embeddedness describes the fact that economic actions are influenced by the structure of the overall social network in which they are embedded (Granovetter, 1992). Structural embeddedness can affect the behaviour of individuals by affecting the information available when decisions are made (Granovetter, 1992). As Cyert and March (1963) argue, firm decision making is constrained by the bounded rationality of a firm’s information set. Similarly, firm choice of alliance partners is constrained by the availability of partner information. Firms cannot enter alliances with partners they do not know. Ties with partners can be used to gather partner information, which in turn can be used to evaluate whether or not the partner possesses complementary resources. Partners can even introduce other potential partners that possess complementary resources to the firm (Gulati, 1995). As a result, the larger the number of ties associated with a firm, the greater the access to partner-related information (Granovetter, 1973; Gulati, 1999; Koka and Prescott, 2002; Pollock et al., 2004; Uzzi, 1996; Zaheer and Bell, 2005) and the greater the probability of finding alliance partners with complementary resources.

The number of ties associated with a firm is usually referred to as the degree of centrality of the firm (Brass and Burkhardt, 1992; Ibarra, 1993), which means the degree to which the firm is at the network’s core (Marsden, 1990). Centrality is an important measurement of structural embeddedness. Consequently, the higher the degree of firm centrality, the more partner information available and the greater the likelihood that a firm will find partners with complementary resources. For instance, Pou Chen, which entered alliances with many international buyers, including Nike, Adidas, Reebok, New Balance, Timberland, Converse, Asics, Merrell, Salomon, and Puma, performed better than Feng Tay, which only entered alliances with Nike. Quanta, which had ties with multiple buyers, performed better than Inventec, which had fewer ties. The higher performances of Pou Chen and Quanta may be due to their ability to find partners with complementary resources resulting from higher degrees of centrality.

**P6.** The likelihood of a firm finding partners with complementary resources increases with firm centrality.

**Relational embeddedness**

Relational embeddedness refers to the influence of dyadic relationships on economic actions (Granovetter, 1992). Three main mechanisms within relational embeddedness affect alliance activities: trust, fine-grained information transfer, and joint problem-solving (Uzzi, 1996, 1997; Kale et al., 2000; Coleman, 1988; McEvily and Marcus, 2005). As argued above, informal mechanisms also govern transaction hazards in alliances. Trust can be regarded as comprising informal governance mechanisms that mitigate concerns regarding opportunistic behaviour (Coleman, 1988; Reuer and Arino, 2007; Ryu et al., 2008). Information transfer can reduce information asymmetry, which is a precondition of opportunistic behaviour. By implementing joint problem-solving, firms can intervene in partner decisions that damage their benefits. Thus:

**P7.** Perceived degree of transaction hazards decreases as relational embeddedness increases.

Relational embeddedness also facilitates the establishment of efficient interorganizational routines. Without trust and information exchange between alliance partners, firms will not invest in specific assets that are more efficient and that yield greater synergies, but that are also more hazardous because of the imperfect nature of formal contracts as governance mechanisms (Dyer, 1997; Webster, 2002; Mesquita and Lazzarini, 2008). Kotabe et al. (2003) found that longer collaboration duration between an automaker and a supplier is associated with greater trust and information sharing, enabling greater investment in interorganizational routines and better performance in technology transfer. MacDuffie and Helper (1997) also found that Honda avoids establishing more collaborative channels with suppliers until it becomes more familiar with them.

**P8.** Firm willingness to invest in efficient interorganizational routines increases with degree of relational embeddedness.

**Institutional embeddedness**

Firms are also embedded in their institutional contexts. Institutional embeddedness refers to the fact that economic actions are embedded in the unique external and internal social environments of firms, including structural, political, cultural, and cognitive contexts (Dacin et al., 1999; DiMaggio and Powell, 1983; Zukin and DiMaggio, 1990). Because structural embeddedness has been discussed earlier, this section focuses on the last three domains. As discussed below, political and cultural contexts can be categorized as external environments, and cognitive contexts can be considered internal environments of the firm.

**External social environments**

External environments may strongly impact alliance activities, particularly the allocation of value-added activities. As argued by Dacin et al. (2007), firms require legitimacy to access a
market. However, manufacturing firms from newly industrialized countries such as Taiwan are usually small and relatively unknown (Hamilton, 1997; Hamilton and Biggart, 1988). Manufacturers based in these newly industrialized countries lack the legitimacy to access major markets such as the USA, Japan, and the European Union. Alliances with global and local firms with legitimacy and brand reputation in these markets offer a solution to this problem (Bourdeau et al., 2007; Oliver, 1990); thus, firms from newly industrialized countries prefer OEM, ODM, or EMS agreements to OBM ones.

On the other hand, to gain legitimacy in their home countries and to access human resources, financial resources, and stakeholder support, manufacturing firms based on newly industrialized countries prefer OBM to OEM, ODM, or EMS agreements. For example, the Taiwanese people and their government aspire for Taiwanese firms to build their brand names. Because the wage rate in Taiwan is much higher than in China (in 2006, an average of US$300 per week in Taiwan and US$43 per week in China), the Taiwanese manufacturing base has been moving to China, and local job opportunities in manufacturing firms are declining. To retain added value and job opportunities in Taiwan, the Taiwanese government has launched a plan, “Branding Taiwan,” which provides financial and other support to firms seeking to establish their own brands (for more detail, see www.brandingtaiwan.org). As a consequence, Taiwanese firms prefer OBM to other agreements. Similar situations may also occur in other newly industrialized countries, such as South Korea and Singapore.

To gain legitimacy in the US, Japanese, and EU markets, manufacturing firms based on newly industrialized countries will prefer OEM, ODM, or EMS agreements to OBM agreements.

P9b. To gain legitimacy domestically, manufacturing firms based on newly industrialized countries will prefer OBM to OEM, ODM, and EMS.

Internal environments

A firm’s internal environment also significantly affects alliance activities. In particular, cognitive processes constrain a firm’s ability to pursue neoclassic economic rationality (Cyert and March, 1963; Simon, 1991; Dacin et al., 1999; Zukin and DiMaggio, 1990). Cognitive processes particularly impact governance structure selection. Synthesizing institutionalism and TCE, Roberts and Greenwood (1997) argued that cognitive limitations lead firms to select a satisfactory governance structure rather than an optimal one. As long as current performance is satisfactory, or “good enough,” a firm will not seek better governance structures. Even when current performance is unacceptable, a firm will merely select a satisfactory governance structure. Bounded rationality also limits the ability of decision makers to evaluate governance structure efficiency. Argyres and Mayer (2007) also proposed that firms entering alliances need capability to design alliance contracts that fit the transaction attributes. Additionally, Garcia-Pont and Nohria (2002) and Osborn et al. (1998) have all maintained that alliance governance structure selection is mimetic behaviour rather than the product of rational calculation. Xia et al. (2008) also showed that foreign-entry strategy or governance structure decisions become mimetic behaviour when firms face uncertainty and lack information.

Embeddedness as a sustainable advantage

In this study, we argue that maker-buyer alliances are economic behaviours that combine complementary resources and capabilities owned by two or more alliance partners to create synergies that enhance performance; simultaneously, maker-buyer alliances are embedded in social contexts that constrain or enhance economic behaviour and performance. If firms were not embedded in unique social contexts, they could be expected to behave in the same optimal way with the same optimal performance. However, this is not the case. The fact that firms respond to the social contexts in which they are embedded results in different performance. Embeddedness can be regarded as a strategic resource that explains firm sustainable advantage (Gulati et al., 2000). Although some authors have argued that firms can modify the social contexts in which they are embedded to enhance their performances through strategic behaviour (Dacin et al., 1999), we believe that this is difficult without strong strategic intent.

We have argued that the probability of finding alliance partners with more complementary resources increases with degree of centrality. Drawing from network theory, centrality is a sustainable competitive advantage that is difficult for competitors to imitate. A higher degree of centrality implies a greater likelihood that a firm will enter a new alliance (Gulati and Gargiulo, 1999; Gulati, 1999; Tsai, 2000), further increasing firm centrality. In other words, centrality is path dependent and difficult for competitors with low centrality to imitate.

Relational embeddedness is also difficult for competitors to imitate. The greater the mutual trust between two firms, the greater the likelihood they will establish a new alliance (Gulati, 1995; Gulati and Gargiulo, 1999; Chung et al., 2000). Mutual trust is further increased through interactions between two firms in a new alliance (Nahapetian and Ghoshal, 1998; Zucker, 1986). Competitors with lower trust cannot imitate such relationships quickly; thus, relational embeddedness is a sustainable competitive advantage.

Cognitive embeddedness is another sustainable competitive advantage. Gulati (1999) demonstrated that the likelihood
that a firm will enter a new alliance increases with its alliance experience, implying a virtuous circle of increasing experience and cognitive capability. Varadarajan and Cunningham (1995) also argue that a firm’s prior involvement in strategic alliances can influence its propensity to enter future ones. A competitor with less alliance experience cannot imitate this cognitive capability, which is path dependent.

To summarize, firms may understand that managing strategic alliances involves the four major tasks of searching for partners with complementary resources, allocating value-added activities, establishing efficient interorganizational routines, and employing adequate governance structures, as argued above. However, they may not be able to perform these tasks as well as other firms because they are embedded in different social contexts that result in different performance levels. Performance differences will persist because embeddedness is path dependent and thus difficult for competitors to imitate. Without strong strategic intent, changing the environment in which a firm is embedded through strategic behaviour is difficult.

**Discussion and conclusion**

**Managerial implications**

In today’s business world, relationships between manufacturers and intermediate buyers are less and less governed by pure market or hierarchical mechanisms; rather, they are increasingly governed by hybrid structures that combine market and hierarchy to various extents – namely, strategic alliances. Partners in strategic alliances invest in efficient interorganizational routines that would not be possible in market relationships. At the same time, a strategic alliance keeps two or more firms autonomous, retaining high-power incentives and flexibility for partner firms, and thus avoiding the failures of hierarchy. Managers can address hazards regarding investment in interorganizational routines by introducing various interorganizational governance mechanisms identified in this study, including formal contracts, mutual stock holding, mutual hostage arrangements, trust, information sharing, and joint problem-solving.

Some scholars emphasize the benefits of weak ties (Granovetter, 1973; Burt, 1992, 2004), while others advocate the benefits of strong ties (Krackhardt, 1992; Coleman, 1988). This study proposes both. A few strong ties and a lot of weak ties are crucial for firms entering maker-buyer alliances. The merits of strategic alliances or hybrid structures may help to explain why Uzzi (1996, 1997, 1999) found that firms should be somewhat embedded, but not overly embedded in their networks. Put another way, a firm should seek to maintain deep, long-term relationships with one or a few partners by investing in efficient interorganizational routines, while simultaneously retaining flexibility by keeping in touch with other potential partners to access market and other partner information (Uzzi, 1996, 1997, 1999). Indeed, P6 and P8 of our study propose that a firm should increase its centrality to find more suitable partners while also forming a deep relationship with a particular partner to improve efficient interorganizational routines. Manufacturers’ managers sometimes face the dilemma of deciding whether to concentrate on one buyer or produce for several buyers. This study suggests the value of maintaining strong ties with one buyer and establishing new relationships with other buyers. Tiwana (2008) also found that tie strength and tie diversity are complementary. Indeed, although Toyota establishes intimate relationships with its suppliers, the company encourages its suppliers to find new customers as well.

As described above, the Taiwanese government is undertaking projects aimed at changing the institutional environment of firms, such as trying to help Taiwanese firms build their own brands. However, as suggested in this study, existing Taiwanese manufacturing firms should deliberate before establishing their own brands. Combining manufacturing and branding capabilities within a single firm may result in inefficiency due to increased organizational size and decreased flexibility. This phenomenon explains why international buyers such as Hewlett-Packard, Dell, Toshiba, and Nike disintegrated their value-chain activities and increased their outsourcing. For Taiwanese manufacturing firms, enhancing capabilities associated with manufacturing, quality management, design, logistics, and product decisions is at least as important as building brand names.

Managers can use the integrated framework proposed here to guide their decision-making about maker-buyer alliances. Although some previous research has established general theories of strategic alliances that contribute to scholarly understanding (Oliver, 1990; Varadarajan and Cunningham, 1995; Sheth and Parvatiyar, 1992; Dwyer et al., 1987; Borys and Jemison, 1989; Wilson, 1995), this study contributes to practical managers in two ways. First, unlike much of the previous work, which Granovetter described as “undersocialized,” the present study considers economic and social issues simultaneously. This is important because managers need to understand that performance differences persist in part because the social context of an alliance may offer sustainable competitive advantages or disadvantages to the firms involved. Second, this study focuses on maker-buyer alliances and depicts them in great detail. Some of the previous research attempted to establish general theories of strategic alliances rather than theories about maker-buyer strategic alliances specifically. A general theory of strategic alliances will be too general to convey the necessary details that concern managers. For instance, maker-buyer alliances and learning joint ventures are two different types of alliances; the goal of maker-buyer alliances is to keep complementary capabilities in two or more separate firms, while the goal of a learning joint venture is to learn the partner’s capability and internalize it. A model intended to explain them both will be so general that some necessary details will be sacrificed; the greater the focus, the more details offered. By applying Granovetter’s paradigm of embeddedness to maker-buyer alliances, this study depicts not only the whole picture, but also the necessary details of maker-buyer alliances for practical managers.

**Future research directions**

Notably, the framework developed in this study is based on the embeddedness paradigm proposed by Granovetter (1985, 1992) and other scholars, which is not a model. Other constructs and relationships among constructs may be added to this framework. We can expect that as more and more research on maker-buyer alliances is published, our knowledge about alliances will increase, and new findings can be used to extend and refine the framework this study presents. New constructs, both economic and social, and new
relationships among constructs can be added to refine this framework. In addition, new research ideas can be derived from this framework. What other economic problems must be resolved to enhance synergies in a maker-buyer alliance? What other social contexts are relevant to constrain or enhance a firm’s alliance activities? What other relationships exist among social context variables and economic activities?

A second direction for future research would be empirical work that examines this framework. Although testing the propositions presented in this study individually is not difficult, conducting empirical work based on the framework as a whole is somewhat more challenging, as the framework is complicated and the unit of analysis of various variables may be different. Nonetheless, empirical efforts for this framework are promising.

Additionally, to focus closely on relevant details, this study considered only maker-buyer strategic alliances. Comprehensive frameworks for other alliances (such as learning alliances or alliances for new product development) are also needed. Fortunately, Granovetter’s paradigm of embeddedness is also applicable to the construction of integrated frameworks for other alliances. For example, to establish a comprehensive framework for alliances for new product development, researchers could consider the following questions: What are the economic goals of alliances for new product development? The answer may be combining complementary resources to create synergies, risk sharing, and building industry standards (Utterback, 1994). What are the economic problems that need to be solved to achieve these goals? We can expect these economic problems to be somewhat different from those of maker-buyer alliances. Physical interorganizational routines in alliances for new product development may be less important than in maker-buyer alliances, and governance problems may focus instead on protection of knowledge from appropriation by partners (Teece, 2000). Researchers would also have to consider the social contexts in which the economic activities of new product-development alliances are embedded. One might expect the institutional regime for the protection of property rights may emerge as a critical factor (Teece, 2000).

References


## Maker-buyer strategic alliances: an integrated framework

**Chih-Pin Lin and Hsin-Mei Lin**


### Further reading


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### Executive summary and implications for managers and executives

*This summary has been provided to allow managers and executives a rapid appreciation of the content of this article. Those with a particular interest in the topic covered may then read the article in toto to take advantage of the more comprehensive description of the research undertaken and its results to get the full benefits of the material present.*

In today’s business world relationships between manufacturers and intermediate buyers are less and less governed by pure market or hierarchical mechanisms; rather, they are increasingly governed by hybrid structures that combine market and hierarchy to various extents – namely strategic alliances. Partners in strategic alliances invest in efficient interorganizational routines that would not be possible in market relationships. At the same time, a strategic alliance keeps two or more firms autonomous, retaining high-power incentives and flexibility for partner firms, and thus avoiding the failures of hierarchy.

Managers can introduce various governance mechanisms, including formal contracts, mutual stock holding, mutual hostage arrangements, trust, information sharing, and joint problem-solving.

In a Taiwan-based study, “Maker-buyer strategic alliances: an integrated framework”, Chih-Pin Lin and Hsin-Mei Lin argue that strategic alliances are embedded in their social contexts which significantly influence alliance activities and may be sources of sustainable competitive advantages or disadvantages.

Maker-buyer agreements between Taiwanese manufacturers and international buyers are generally strategic alliances rather than arm’s-length market agreements, in that they involve the exchange of capabilities of both firms within a longer cooperation horizon than arm’s-length agreements, and given that the agreements are more complex and require more coordination.

Maker-buyer alliances combine complementary resources and capabilities owned by two or more alliance partners to create synergies that enhance performance. Simultaneously, they are embedded in social contexts that constrain or enhance economic behaviour and performance. If firms were not embedded in unique social contexts, they could be expected to behave in the same optimal way with the same
optimal performance. However, this is not the case. The fact that firms respond to the social contexts in which they are embedded results in different performance.

The probability of finding alliance partners with more complementary resources increases with the degree of centrality. Centrality is a sustainable competitive advantage that is difficult for competitors to imitate. A higher degree of centrality implies a greater likelihood that a firm will enter a new alliance, further increasing firm centrality. In other words, centrality is path dependent and difficult for competitors with low centrality to imitate.

Relational embeddedness is also difficult for competitors to imitate. The greater the mutual trust between two firms, the greater the likelihood they will establish a new alliance. Mutual trust is further increased through interactions between two firms in a new alliance. Competitors with lower trust cannot imitate such relationships quickly; thus, relational embeddedness is a sustainable competitive advantage. Cognitive embeddedness is another sustainable competitive advantage. The likelihood that a firm will enter a new alliance increases with its alliance experience, implying a virtuous circle of increasing experience and cognitive capability.

To summarize, firms should understand that managing strategic alliances involves the four major tasks of searching for partners with complementary resources, allocating value-added activities, establishing efficient interorganizational routines, and employing adequate governance structures. However, they may not be able to perform these tasks as well as other firms because they are embedded in different social contexts that result in different performance levels. Performance differences will persist because embeddedness is path dependent and thus difficult for competitors to imitate. Without strong strategic intent, changing the environment in which a firm is embedded through strategic behaviour is difficult.

Lin and Lin note that some scholars emphasize the benefits of weak ties while others advocate the benefits of strong ones. This study proposes both. A few strong ties and a lot of weak ties are crucial for firms entering maker-buyer alliances. A firm should seek to maintain deep, long-term relationships with one or a few partners by investing in efficient interorganizational routines while simultaneously retaining flexibility by keeping in touch with other potential partners to access market and other partner information. Indeed, a firm should increase its centrality to find more suitable partners while also forming a deep relationship with a particular partner to improve efficient interorganizational routines. Manufacturers’ managers sometimes face the dilemma of deciding whether to concentrate on one buyer or produce for several buyers. This study suggests the value of maintaining strong ties with one buyer and establishing new relationships with other buyers. (Although Toyota establishes intimate relationships with its suppliers, the company encourages its suppliers to find new customers as well.)

The Taiwanese government is undertaking projects aimed at changing the institutional environment of firms, such as trying to help Taiwanese firms build their own brands. However, existing Taiwanese manufacturing firms should deliberate before establishing their own brands. Combining manufacturing and branding capabilities within a single firm may result in inefficiency due to increased organizational size and decreased flexibility. This phenomenon explains why international buyers such as Hewlett-Packard, Dell, Toshiba, and Nike disintegrated their value-chain activities and increased their outsourcing. For Taiwanese manufacturing firms, enhancing capabilities associated with manufacturing, quality management, design, logistics, and product decisions is at least as important as building brand names.

(A précis of the article “Maker-buyer strategic alliances: an integrated framework”. Supplied by Marketing Consultants for Emerald.)