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A Dynamic Perspective

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ABSTRACT

This paper focuses specifically on interfirm strategic collaboration as a vehicle for knowledge management across firm boundaries. Drawing on the widely accepted exploitation/exploration dichotomy, this article contributes to research concerning alliance dynamics by combining elements related to alliance formation, negotiation and outcomes. By integrating the exploitation/exploration arguments into a set of knowledge-related strategic motives for alliance formation, the main arguments focus on the influence of governance mechanisms on the relationship between strategic fit and outcome in terms of knowledge. This paper integrates the emergent knowledge-based theories of alliance formation (and outcome) with existing theories related to governance and coordination in an attempt to explain how the knowledge outcome of collaborative relationships may be determined by the strategic fit of partner motives, influenced by the mix of contractual and procedural governance. A series of testable propositions are derived in order to answer the following question: Do combinations of contractual and procedural coordination, given specific strategic fit, explain performance differentials?

Key words: Strategic alliance, Procedural governance, Contractual governance, Knowledge management, Fit.

INTRODUCTION

The dramatic growth of collaboration between independent firms is fundamentally reshaping the nature of business. As market complexity is growing and customers demand 'full solutions' rather than individual products or services, interfirm collaboration has become a crucial component in the pursuit of competitive advantage for the business firm. In fact, supply chain management, an integrated approach to the planning and control of materials, services and information flows from suppliers through factories to the end customer, represents one of the most significant paradigm shifts of modern business management by recognizing that individual businesses no longer compete as solely autonomous units, but rather as collaborative supply chains (Chen and Paulraj 2004). Yet such collaborative arrangements are very complex to manage successfully, partly because of the difficulty of matching the goals and aspirations of autonomous organizations, often headquartered in two or more countries. Often the good intentions and rational motives behind these alliances are not congruent with the strategic direction of either firm on its own, let alone the strategic direction of both in unison. As a result, alliances often exhibit high degrees of instability and poor performance (e.g., Beamish and Delois, 1997; Millington and Bayliss, 1997; Parkhe, 1993a). More often than not synergistic gains and positive spillover effects in terms of knowledge creation and learning for the parents never materialize.

Lately, we have experienced a shift from an economy based on physical objects to an economy based on knowledge. In such an economy, most of a firm's value is measured in "knowledge capital", embedded in its personnel, organization, patents, copyrights, brand value and other intangible assets (Lissack and Roos, 1999). In the rapidly changing knowledge-based economy, issues like customization, flexibility, rapid response, and deconstruction of the value chain favors alliances over other forms of governance (Contractor and Lorange, 2002). Hence, the effective management of (inter)organizational knowledge has increasingly been linked to

competitive advantage and thus considered critical to the success of the business firm (e.g. Anand and Khanna, 2000; Grant and Baden-Fuller, 2002).

Given that research on strategic collaboration between firms has received increasing attention in the literature recently, reflecting the increasing frequency and importance of strategic alliances in business practice, it is surprising that very few attempts have been made to link effective knowledge management to the development of alliances (Nielsen, 2005; Eunni et al., 2006). A notable exception is the Knowledge Accessing Theory of Strategic Alliances by Grant and Baden-Fuller (2004), which explicates not only the different roles of knowledge in alliance formation (acquisition versus accessing) but also proposes knowledge accessing (exploitation) to be the most important motive and establishes the circumstances in which strategic alliances are more efficient than market or hierarchy in integrating and utilizing knowledge. While this paper builds on the same dichotomy between knowledge generation (exploration) and knowledge application (exploitation), it extends the discussion to include alliance-specific governance processes related to both contractual integration and procedural coordination. Moreover, the present study allows for adaptation in both governance forms as the alliance relationship develops and considers the potential effects on knowledge outcomes.

Another notable exception, and one most germane to this study, is the theory development note by Contractor and Ra (2002), which examined how knowledge attributes influence the selection of different alliance types. According to Contractor and Ra (2002), alliance governance choice is driven on the one hand by characteristics of the knowledge to be shared (codification, newness, complexity and teachability) and on the other hand by characteristics of the alliance partner firms (absorptive capacity of the knowledge-recipient firm and organizational/sectoral embeddedness of the knowledge base in the knowledge-supplying firm). While acknowledging differences in partner's strategic perceptions with regards to opportunistic appropriation and IP rights management, Contractor and Ra neglect the influence of the important underlying dimension

of strategic intent or motive. Indeed, testing this model empirically, O'Dwyer and O'Flynn (2005) found partner intentions and the strategic value placed on knowledge to influence governance choice.

Rather than making governance choice the *dependent variable* by asking how different attributes of knowledge influence modal choice in strategic collaboration, this article assumes governance, conceptualized as two distinct forms: contractual integration and procedural coordination, to exhibit *mediating and moderating effects*, respectively, on the relationship between match of strategic motives and alliance knowledge outcome. Moreover, this article adopts an evolutionary perspective and distinguishes between initial strategic fit, leading to choice of contractual governance mode, and subsequent ongoing procedural management related to the implementation of the partnership contract. Hence, this article offers at least two main contributions to the strategic alliance literature: First, it develops a framework for analyzing the interaction between (knowledge-based) strategic fit and contractual and procedural governance in the pursuit of specific knowledge-related outcomes. As such, the framework clarifies the different roles that contractual and procedural governance play during the evolution of the strategic alliance relationship and offers specific predictions as to the most efficient[1] governance setup for particular types of alliances. Second, it sheds light on the role of misfits and the effects on desired outcomes in order to advance our understanding of why alliances fail. The model goes beyond the static life-cycle treatment of alliance development as a predictable linear sequence of stages (e.g. Brouthers et al., 1997; George and Farris, 1999) and offers a dynamic perspective of the mechanisms for governance adjustment and adaptation necessary in order to facilitate ongoing relations as the alliance evolves. Thus, this paper adopts an evolutionary perspective on alliance governance and management (Ariño and de la Torre, 1998; Doz, 1996; Ariño and Reuer, 2004) by focusing on the

[1] It should be noted that some researchers (e.g. De Rond and Bouchikhi, 2004) argue that there is no most efficient governance form since alliances are instable organizational arrangements subject to many tensions. While his paper agrees with the dynamic nature of alliances, it adopts the view that efficient governance structures (i.e. the mix between contractual integration and procedural coordination) can be devised as a result of adaptation.

transitional dynamics of realignment of both partner motives and governance structures in response to changing conditions and assumptions (Quinn, 1980; Salbu and Brahm, 1994). Responding to recent criticism about the lack of ability of alliance research to fill both the academic and managerial relevance gaps (see Bell et al., 2006 and Hennart, 2006), this article attempts to answer the following pertinent question (Sobrero and Schrader, 1998): Do combinations of contractual and procedural coordination, given specific strategic fit, explain performance differentials in terms of knowledge outcome?

CONCEPTUAL MODEL

The dynamics of alliance development has received little attention in the extant literature, representing a critical omission in the development of a more complete theoretical and managerial understanding of alliance management (Bell et al., 2006). Theories on alliance formation abound, ranging from the economic perspective offered by transaction cost and resource dependence considerations related to the most effective distribution of contractual rights within a relationship in order to maximize economic and psychological benefits (e.g. Williamson, 1985, 91; Pfeffer and Salancik, 1978) to behavioral process perspectives, such as institutional and organizational learning theories (e.g. DiMaggio and Powell, 1983; Levitt and March, 1988; Kogut and Zander, 1993). Most of these studies approach alliance formation from a narrow and static theoretical perspective and pay limited attention to processes and dynamics that may lead to adaptation in governance mode as the alliance relationship evolves over time.

One popular stream of research views alliances as “learning races”, where firms enter into collaboration in order to internalize (absorb) the knowledge contributed by their alliance partners only to dissolve the alliance as soon as this has been accomplished and before the partner can catch on (Hamel, 1991; Hamel et al., 1989; Pucik, 1988). A criticism of this view, however, proposes that while some alliances may end up as learning races, this is more likely to be a symptom of failure or

strategic mismatch than a desirable way for alliances to evolve (see Zeng and Hennart, 2002 for a review). This is, in part, due to the explicit emphasis on internalization of partner knowledge, which is considered to be cost effective. In contrast, the organizational learning literature (e.g. Doz, 1996; Inkpen, 2000; Lyles, 1994) takes a more process oriented view of learning not *from* alliance partners but *with* partners through alliances. More recently, co-specialization or cooperative specialization views have been advanced, in which firms party to alliances will specialize in certain activities and let their partner access them in exchange for their own access to the present or future contributions of their partners (Zeng and Hennart, 2002; Doz and Hamel, 1998).

Research has also emphasized that effective alliance governance can significantly enhance firms' joint learning and knowledge creation (e.g., Dutta and Weiss, 1997; Larsson et al., 1998). From a learning perspective, equity joint ventures are considered to be better suited than alternative governance mechanisms to the transfer and learning of tacit and embedded know-how because they align incentives for cooperation, permit a replication of the organizations themselves and provide prolonged and intense social interaction that facilitates the replication of organizational routines (Dutta and Weiss, 1997). Equity sharing might align the motivation of the partners, thereby creating mutual interests that reduce the likelihood of opportunistic behavior by partners (Oxley, 1997; Pisano, 1989). Moreover, equity participation generates a governance structure in which companies can monitor the activities of the alliance as they are represented on the board of directors. Mjoen and Tallman (1997), on the other hand, argue that the relative degree of control of partners in a joint venture is determined by a bargaining process based on the importance of the resources that each partner contributes, rather than ownership level. Poppo and Zenger (2002) argue that the "right" mix of trust and formal contracting enhances cooperative interactions; however, they fail to specify precisely how this right mix is attained. To this end, some studies show that more complex alliances tend to be governed through more hierarchical forms, with the nature of complexity being identified by various measures including number of partners, scope of product and/or technology, nature of

functional activities covered by the alliance, and technological intensity of industries (e.g., Oxley, 1997; Hagedoorn and Narula, 1996).

Previous research has distinguished between contractual and procedural interorganizational coordination mechanisms (for a review, see Sobrero and Schrader, 1998). Contractual governance is concerned with the distribution of rights. The main vehicle for this kind of control is the alliance contract, which seeks to minimize disputes among transactors and resolve these when they arise. The threat of legal recourse encourages parties to an alliance to perform their promises with a minimum of prompting and prodding, in order to avoid the costs of litigation or other modes of dispute resolution. As such, contractual governance is the essence of formal alliance formation as it defines the legal boundaries within which joint problem-solving activities will occur. Procedural governance, on the other hand, refers to the structuring of the mutual knowledge flows between parties to the alliance. As such, procedural governance pertains to frequency, timing, directionality and means of knowledge flows *ex post* alliance formation and is concerned with how joint problem-solving is carried out.

Relational contracts have at least three distinguishing yet interrelated characteristics that make up the essence of an alliance (Speidel, 2000; Ring, 2002). First, rather than a “spot” market deal, the relationship extends over time. Second, precisely due to the extended duration of relational contracts, parts of the exchange, such as performance measurements, cannot be clearly defined at the time of the contracting. This inability of parties to “presentiate” the terms of the bargaining at the time of the contracting shifts the focus to circumstances and conduct that occur *ex post* contract. Third and consequently, the interdependence of the parties to the exchange extends at any given moment beyond the single discrete transaction to a range of social interrelationships. Hence, it seems evident that the outcome of an alliance is determined, in part, by the mixture of contractual and procedural governance mechanism employed.

The influence of alliances on firm performance, one of five broad foci of the strategic alliance literature (Gulati, 1998)[2], has received relatively little empirical attention (Smith et al., 1995), although the *potential* benefits to firms from alliance participation are quite broad and have been discussed extensively (see Gulati, 1998 and Contractor and Lorange, 1988 for reviews). Within the domain of firm performance, alliances are often considered to be the wellspring of firm innovation and a source of new capabilities (Badaracco, 1991; Hamel, 1991; Leonard-Barton, 1995). While alliances are often found to have a positive impact on these various measures of firm performance, the empirical evidence remains mixed and often inconsistent (Gulati, 1998; Olk, 2002). Since these objective measures fail to adequately reflect the extent to which the alliance has achieved its short- and/or long-term objectives, more qualitative measures have recently been explored. Hence, researchers introduced subjective measures, such as satisfaction with overall goal attainment and different measures of learning (for an overview and critique of performance evaluation see Olk 2002). Empirical research in this area has examined the characteristics of alliances and alliance networks that enhance knowledge transfer and firm innovation (e.g. Rosenkopf and Lavie, 2007; Nielsen, 2007; Rothaermel and Deeds, 2004). Most empirical evidence suggests that collaborative ventures have a positive, albeit often indirect, impact on firm learning and innovation (e.g., Deeds and Hill, 1996; Mowery et al., 1996).

While promising, research in this area has not sufficiently demonstrated that alliances influence the development of new knowledge-related resources nor has it identified the conditions under which such development occurs (Hagedoorn et al., 2000; Nielsen, 2005). Prior research has articulated a linkage between inter-partner "fit" and venture performance, however, "fit" has been postulated using different notions such as strategic symmetry (Harrigan, 1988), inter-firm diversity (Parkhe, 1991), match of partner characteristics (Geringer, 1988), or inter-partner compatibility/

[2] The remaining four areas of the research literature on strategic alliances identified by Gulati (1998) include: alliance formation, alliance governance, the evolution of alliances and alliance networks.

complementarity (Beamish, 1988). The result of this operational confusion (see Venkatraman and Camillus, 1984) has led to a lack of consistency in empirical findings. This paper attempts to reconcile these differences and proposes a theoretical framework, linking motives for alliance formation to alliance outcome from a knowledge perspective. As a result, the present paper extends previous research (e.g., Contractor and Ra, 2002) by modeling alliance contractual governance as a mediator of the relationship between strategic fit and alliance outcome and developing predictions related to knowledge outcomes. Consistent with Venkatraman (1989), "fit" in this paper should be seen as "matching" as it relates to the theoretically defined match between two related sets of variables, here the underlying strategic motives of the two partners of the alliance. Procedural governance serves as a coordination mechanism to structure the mutual exchange of knowledge among parties during the evolution of the alliance relationship and moderates the extent to which contractual governance influences alliance performance. Figure 1 below depicts this framework.

FIGURE 1 HERE

STRATEGIC FIT AND MOTIVATIONAL INTENT

Strategic fit and exploration/exploitation

The literature has produced an impressive list of reasons for why organizations enter into an alliance, including categorizations such as "X form" and "Y form" coalitions (Porter and Fuller and 1986), "scale" and "link" alliances (Hennart, 1988). Another general classification is "learning alliances", where the objective is to learn and acquire from each other products, skills, and knowledge (Lei and Slocum, 1992) and "business alliances", intending to maximize the utilization of complementary assets (Harrigan, 1985). In terms of strategic choice of the firm, this seems consistent with the widely accepted dichotomy in terms of the choice between exploiting existing resources and capabilities or exploring new opportunities (March, 1991; Koza and Lewin, 1998).

While research on exploitation and exploration has emerged as and underlying theme in diverse research areas such as organizational learning and strategy (Levinthal & March, 1993; Vera & Crossan, 2004), innovation (Lee et al., 2003; Rothaermel & Deeds, 2004), and entrepreneurship (Shane & Venkataraman, 2000), our understanding of the differential roles and consequences of these activities remain unclear (for a review, see Gupta et al., 2006). Exploitation is concerned with increasing the productivity and efficiency of employed capital and assets through standardization, systematic cost reductions, and improvement of existing technologies, skills, and capabilities (Koza & Lewin, 1998). Exploration, on the other hand, is associated with discovering new opportunities for wealth creation and above average returns via innovation, invention, building new capabilities, and investment in the firm's absorptive capacity (Cohen & Levinthal, 1990). Although conceptually a clear distinction, in practice this dichotomy is thought to reflects a continuum of choices between these two extremes, as firms are likely to seek both exploiting and exploring benefits from their involvement in collaborative ventures; too much emphasis on exploitation may lead to the adoption of suboptimal routines, while too much emphasis on exploration may lead to incurring the high costs of experimentation without realizing its benefits. Lately, various literatures have argued for the simultaneous pursuit of both exploitation and exploration via loosely coupled and differentiated subunits or individuals (e.g., Benner & Tushman, 2003; Tushman & O'Reilly, 1996) that is firms need to become *ambidextrous* (Gibson & Birkenshaw, 2004; He & Wong, 2004).

The returns associated with exploitation are typically more certain and closer in time, while returns associated with exploration may be more variable and distant in time. While the conceptual distinction between exploitation and exploration and their implications for strategy and structure have been intensively studied, the literature provides no empirical evidence of the role of exploitation and exploration as fit between alliance formation factors and different types of performance. Studies of exploration and exploitation in the alliance field have primarily focused on external industry forces giving rise to either exploitation (Beckman, Haunschild, & Philips, 2004;

Rothaermel, 2001), exploration (Rowley, Behrens, & Krackhardt, 2000) or both (Koza & Levin, 1998) from an interorganizational learning perspective. Even when internal organizational forces are considered (e.g., Lavie and Rosenkopf, 2006), exploration and exploitation is typically treated as the dependent variable, often measured with a single indicator or construct based on the assumption that exploration inhibits exploitation and vice versa (Abernathy, 1978; March, 1991; Sobrero and Roberts, 2001).

According to Levinthal and March (1993, p. 105) the basic problem confronting an organization is "to engage in sufficient exploitation to ensure its current viability and, at the same time, to devote enough energy to exploration to ensure its future viability". Empirically, though, there is very little support for the *ambidexterity* hypothesis (see He and Wong, 2004 for a review) and it seems that exploitation and exploration are fundamentally different logics that create tension because they compete for firms' scare resources and strategic focus. Indeed, March (1991, 1996, 2006) suggests that even though both may be necessary for long-run adaptation they are fundamentally incompatible and the interplay between the two occurs in the form of a zero-sum game. Hence, while an organization may control the *internal* balance between exploration and exploitation by adjusting aspirations, beliefs, feedback, incentives, and socialization or selection processes, in an interorganizational setting, different motives (exploration versus exploitation) among partners is likely to lead to strategic mismatch.

Consistent with Gupta, Smith, and Shalley (2006) this paper differentiates between exploitation and exploration by focusing on their influence on firm outcome rather than focusing on the presence or absence of learning. Hence, alliance performance is conceived as being contingent upon the fit between strategic intent at the inception of the alliance and subsequent adaptation of coordinating mechanism to produce performance. Certain combinations of contractual and procedural governance are likely to better fit an exploitation motive than an exploration motive.

Motivational intent and exploration/exploitation

Several authors have approached alliance formation from a strategic perspective, providing a host of motives for forming these strategic collaborations (e.g., Harrigan, 1985; Contractor and Lorange, 1988). In relation to knowledge some authors argue that an alternative to the firm specific view of strategic renewal is to acquire new knowledge-related capabilities through strategic integration and mobilize it vis-à-vis the existing knowledge developing activities (e.g., Jemison, 1988). A review of this literature shows a strong similarity in the motives identified, ranging from risk/cost sharing via shaping of competition to institutional concerns with attaining legitimacy from the external environment. Table 1 categorizes the identified motives for alliance formation according to their implied strategic motives and their theoretical roots. The implied motives are classified according to the exploitation/exploration dichotomy described above.

TABLE 1 HERE

As indicated in figure 2 below, the six theoretical foundations for alliance formation fall along a continuum according to reliance on either an economic or a behavioral rationale. Allowing only limited behavioral influence, transaction cost economics (Williamson, 1975; 1983) and resource dependence[3] clearly represent economic explanations for alliance formation, while learning theory and institutional theory (Hamel, 1991; Meyer and Rowan, 1977; DiMaggio and Powell, 1983) fall on the behavioral end of the continuum. Although organizational learning theory is predominantly a behavioral discipline, it does have certain economic implications stemming from the ability of an organization to utilize acquired knowledge to reduce costs or in other ways enhance revenues and profitability (Barringer and Harrison, 2000). The other intermediary theoretical foundations all build on a combination of economic and behavioral disciplines in order to explain formation of strategic collaborative arrangements.

[3] It should be noted that the seminal contribution to this perspective by Pfeffer and Salancik (1978) argue that the behavior of managers has a significant impact on how firms go about seeking resources from their external environments.

FIGURE 2 HERE

Although these six theoretical foundations seem inherently different and offer seemingly unique perspectives on alliance formation, they share a common dichotomous nature in relation to strategic choice between exploitation and exploration. As indicated in table 1 and discussed above, the distinction between economic and behavioral explanations for alliance formation does not predict the strategic choice between exploitation and exploration as all six theoretical explanations can be conceptualized at both ends of this continuum. Thus, explaining formation of inter-organizational relationships is a complex process involving a mix of economic and behavioral paradigms, depending in part on the desired outcome and potential mismatches between the two, influenced by contractual and procedural coordination mechanisms.

CONTRACTURAL AND PROCEDURAL COORDINATION

Contractual governance

Strategic alliancing implies that at least some activities are divided up among the parties to the partnership. This division of labor entails the need for coordination and re-integration. The distribution of rights among the partners is a central determinant of how coordination can occur because it affects the possibilities for each partner to control the coordination of activities performed within the boundaries of the relationship. When entering an alliance, each partner gives up some of its rights and gains others through either explicit or implicit contracts. The resulting allocation of rights and the institutions relating to these rights determine the governance structure. The choice of governance structure[4] to minimize the sum of costs for a given transaction is the core issue investigated by transaction costs economics (Williamson 1975; Williamson 1985).

[4] Although the term 'governance structure' is frequently used in a very broad sense to encompass every measure to organize, structure, and guide economic behavior, the theoretical definitions (Williamson 1979) and empirical operationalizations (e.g., Globerman and Nielsen, 2007; Hennart, 1988) primarily refer to the contractual dimension. Hence, governance structure (or mode) is the contractual means by which to coordinate the behavior of the partners in the relationship.

According to transaction cost logic, a critical underlying issue in the choice of governance mode is the degree to which potential opportunistic behavior on the part of one or more alliance partners characterizes the relevant set of transactions in which the partners will engage. In the transaction cost literature, the characteristics of the underlying transactions are the primary determinants of risks of opportunism. In particular, relevant studies highlight the uncertainty and complexity associated with carrying out specific activities as major sources of difficulty in specifying and enforcing contractual agreements. The greater the costs and risks associated with monitoring and enforcing "arms-length" agreements, the greater the advantages of equity ownership structures in ISAs, *ceteris paribus* (Williamson, 1975; Oxley, 1999; Hennart and Zeng, 2005). Consistently, the governance structure encompasses how the partners obligate themselves to a specific course of action or establish a general commitment to a specific relationship via contractual mechanisms, which define such aspects as how equity (and thus decision rights) is exchanged among the partners, and whether or how instruments such as joint board meetings, personnel exchange, and performance-based incentive systems are to be conducted to govern information rights.

Resource dependency theory (Pfeffer and Salancik 1978) is also concerned with which type of governance structure to choose in a specific situation in an attempt to stabilize transactions and allow for efficient access to external resources in order to stabilize outcomes and to avert environmental control. However, whereas transaction costs economics operate under the assumption that any transaction object is perfectly transferable (Conner, 1991) that is it investigates only the enforceability of a specific transaction, taking its feasibility as given, resource dependency theory acknowledges that the nature of the task itself might limit the options available to govern its completion (Pfeffer and Salancik 1978: 143). For example, the acquisition of some assets, such as tacit knowledge, may require dense interaction (relational embeddedness) between the transaction partners in order to embed the knowledge (Nielsen, 2005; Lam, 1997; Uzzi, 1997). A governance

structure not allowing for such knowledge flows would make the transaction unfeasible. Contractual coordination mechanisms, therefore, have to be aligned with procedural coordination mechanisms.

Procedural governance

Contractual coordination mechanisms provide institutions for achieving the alignment of incentives among the partners. However, from the availability of these institutions, it is impossible to deduce how they are actually employed to coordinate the activities of the partners during the evolution of the relationship. Even if two organizations have contractually agreed on governing institutions for coordination at the outset of the alliance, it does not imply that these necessarily do coordinate their actions as the relationship matures (Sobrero and Schrader, 1998). Hence, a recurring criticism of the transaction cost literature as it has been applied to SA governance choice is that it fails to acknowledge the role that non-transactional attributes play in influencing the choice of governance mode. In particular, relational capital is suggested to be an important determinant of SA governance, where relational capital has been defined as encompassing mutual trust, respect, understanding and friendship between individuals in a business relationship (Thuy and Quang, 2005). Consistently, Doz, Hamel and Prahalad argue that the *actual* coordination is not achieved through contractual mechanisms but, rather, is realized by the day-to-day interaction of the employees involved in the activities of the relationship; 'Top management puts together strategic alliances and sets the legal parameters for exchange. But what actually gets traded is determined by day-to-day interactions of engineers, marketers, and product developers' (1989: 136).

Procedural coordination refers to the continuous coordination of processes among parties, typically accomplished via mutual exchange and embeddedness of knowledge (Nielsen, 2005), through which the partners learn to adjust their activities to each other (Sobrero and Schrader, 1998: 590-591). This is consistent with (inter)organizational learning theory (Levitt and March, 1988;

Huber, 1991), which is preoccupied with how learning processes can be structured or enabled, given the nature of the knowledge to be learned. The purpose of procedural coordination is that actors exchange sufficient information so that they can adjust their mutual behavior in a meaningful way for any given associated distribution of rights among the partners. The degree to which parties can achieve procedural coordination will influence the patterns of knowledge exchange between partners to an alliance. It is likely that the nature of the tasks (e.g., exploration or exploitation) to be carried out during the alliance relationship will influence the expected outcome. Furthermore, the nature of tasks is likely to change constantly during the course of the alliance relationship and thus procedural coordination mechanisms will have to be adjusted accordingly. Therefore, procedural governance will act as moderator of the relationship between contractual governance and alliance knowledge outcome.

THE RELATIONSHIP BETWEEN STRATEGIC FIT, GOVERNANCE AND KNOWLEDGE OUTCOME

The extant literature, as presented above, mostly approaches motives for alliance formation, as well as choice of governance mode, from a static perspective, addressing the question of why firms form alliances as an independent, firm-specific event. This literature is fragmented and there seems to be a general disagreement about the impact of various motives and governance modes on performance. Moreover, most of this literature fails to look at the dynamic interaction between the firms involved in the alliance and the dynamic relationship between the motives of both partners and the potential and desired outcome in terms of knowledge and learning. Rather than examining separately why firms enter these agreements, a better approach involves looking at different knowledge-related outcomes determined by *matches* and *mismatches* between partner motives and aspirations, as shown in figure 3 below. Responding to calls for more dynamic analysis (e.g. Doz, 1996; Das and Teng, 2002), this framework shifts the attention toward the *process* of alliance relationship

development as the model includes transitional stages pertaining to the evolution of the nature of the relationship over time as partner objectives may change during the existence of the relationship (cf. 'emerging goals'; Ariño, 2003). As such, the presented framework overcomes some of the weaknesses of prior studies pertaining to the critical link between pre-alliance formation factors (motives and partner selection) and evolutionary alliance management issues (contractual and procedural coordination) in determining alliance performance.

FIGURE 3 HERE

Exploitation-exploitation fit (top left quadrant)

If both firms enter the partnership strategically motivated by exploitative considerations (for instance risk/cost sharing or access to local knowledge), the focus is on strategic renewal activity within the bounds of the established premises, policies, and customary views as the objective is to create *economies of knowledge* in order to enhance competitive advantage. These alliances are characterized by complementarity in knowledge bases and tend to facilitate transfer of predominantly explicit (formal) knowledge (most likely in the form of carefully drafted agreements) in relation to a specific project (Contractor and Ra, 2002). The emphasis is on refining an existing innovation or process by gathering specific information that will provide deeper knowledge in that particular area. The objective is (implicitly or explicitly) to produce economies of scale (efficiencies) for those activities carried out in collaboration (Dussauge et al., 2000). The focus is on solving problems in the present without examining the appropriateness of current and future learning behaviors. This type of integration is furthermore characterized by the fact that success of the parent companies (as opposed to the partnership) is of main concern to the members of the alliance. Since both organizations are introducing only selected complementary, company-specific (or project-specific) knowledge to the relationship, the main outcome will be transfer of complementary knowledge-related capabilities (*economies of knowledge*).

Examples of this kind of integrative relationship are abundant in the literature on vertical alliances, where firms are looking for similarities and complementarities among upstream and downstream partners with the explicit goal of creating competitive advantage. Other examples of this kind of relationship can be found among horizontal alliances. In the airline industry, for instance, a review of 200 airlines carried out by the Boston Consulting Group (Flanagan and Marcus, 1993) showed that the number one objective/motive for airline alliances was traffic feed, with achievement of scale in sales and marketing as second (80% of airlines surveyed) and increased capacity utilization (55%), station and ground scale (50%), and facilities scale (including purchasing) (50%) following close behind. Gimeno (2004) found that airline networks based on co-specialized alliances reduce intra-network competition while increasing inter-network competition. Given that alliance partners have an ex-post 'inalienable de facto right to pursue their own interests at the expense of others' (Buckley & Casson, 1988, p. 34), the design of self-enforcing governance mechanisms is critical (Dyer & Singh, 1998). Because co-specialization of assets and activities involves sunk costs specific to a partner, these agreements are difficult and costly to reverse. Accordingly, the governance of those alliances tends to involve contractual safeguards, frequent and joint decision-making, equity control, mutual adaptation, as well as interorganizational commitment and trust (Dyer & Singh, 1998; Uzzi, 1997). Hence, one would expect to find relationships based on matching motives of exploitation structured via relatively high levels of contractual governance, such as carefully drafted license agreements or equity joint ventures, in order to manage the flow of proprietary information (e.g., trade secrets about technology, customer lists, pricing). Therefore:

> *Proposition 1a: Strategic alliances based on matching motives of exploitation (strategic fit) are likely to lead to economies of knowledge when combined with a high level of contractual governance.*

Exploration-exploration fit (bottom right quadrant)

Alternatively, when both partners approach the collaboration from an explorative perspective (for instance joint product or market development), learning and knowledge creation is at the forefront of the relationship and the outcome is measured as *synergies of knowledge* in an attempt to develop new capabilities. In the evolutionary economics literature (e.g. Nelson and Winter, 1982), the capabilities view of the firm serves primarily as a micro-foundation for population level analysis of industry and technology evolution. Thus, the capabilities perspective helps rationalize the variety of behaviors – including innovative behavior – that are necessary in any evolutionary account of industry and technology evolution (Metcalfe, 1989). *Synergies of knowledge* is the outcome of these innovative knowledge-driven behaviors stemming from learning processes, as they involve a simultaneous focus on internal, firm-specific competencies and external, collaborative synergies, which plays an important role in creating new knowledge-related capabilities and thereby enhancing competitive performance (Nielsen, 2005). According to this perspective knowledge is viewed as a complex, dynamic and subjective set of assets, which is inherently indeterminate and continually reconfiguring. Hence, new knowledge can be created *among* the participants in a strategic aggregate arrangement as a synergy (and not simply the sum) of the knowledge-related capabilities brought into the collaboration by each member. Consequently, the focus is on gathering new information on many different alternatives. This information is relatively broad and general in nature (Contractor and Ra, 2002), because the emphasis is on identifying viable alternatives rather than seeking to automate any one innovation or process.

Examples of this type of relationship are scarcer in contemporary business reflecting the difficulty of matching asymmetrical knowledge bases and the intrinsic risk and uncertainty involved in this type of venture. However, examples like Toyota and its extended enterprise illustrate the potential gains of synergies and spillover effects from this type of matching, explorative integration. Toyota relies on suppliers for more than 70 percent of the value of its vehicles (Dyer, 2000) and thus management of vertical relationships is critical to the success of the company. Realizing the

importance of the supplier network and the learning potential, Toyota has created knowledge-sharing supplier networks in both the United States and Japan. The main goal of these networks is to create new knowledge through interorganizational learning and knowledge sharing. While Toyota sometimes takes minority ownership positions in their suppliers[5], the nature of these contractual agreements are typically rather flexible, designed to create a sense of mutual destiny and secure goal congruence and trust (credible commitment) – important ingredients in the pursuit of synergies of knowledge (Nielsen, 2005). Results suggest that part of Toyota's success stems from its ability to "out-learn" the networks of its competitors (Dyer, 2000, p. 61). Other examples include joint R&D alliances in high-technology areas (including public-private alliances with universities) organized around loosely structured quasi-hierarchical structures in order to allow greater flexibility and responsiveness to an uncertain and often rapidly changing environment (Osborn and Baughn, 1990). Higher levels of uncertainty may make it difficult (by definition) to anticipate the full range and expected likelihood of alternative outcomes, hindering the ability to effectively consummate detailed contracts that protects a partner's knowledge or technology.

Alliances, based on a strategic fit of matching explorative motives, are often characterized by less co-specialization and thus may entail less mutual dependence. They are easier to reverse without incurring high exit costs. Because of the lower dependence and higher reversibility, firms may encourage actual or potential competition among partners to maintain an arm's length assessment of alternative relations, and exit from ineffective relations (Uzzi, 1997). The lower exit costs of nonspecialized alliances also makes them safe instruments for exploring new uncertain opportunities or new unproven partners (Ring & Van de Ven, 1994). Thus:

> *Proposition 1b: Strategic alliances based on matching motives of exploration (strategic fit) are likely to lead to creation of synergies of knowledge when combined with a low level of contractual governance.*

[5] The rationale for taking equity stakes within a Keiretsu framework is complex and, as reported by several authors (Dyer, 1997; Ahmadjian and Lincoln, 2001), often supplemented by other keiretsu members' own crossholdings etc.

Strategic misfit (top right and bottom left quadrants)

Naturally, being in either the *economies of knowledge* or the *synergies of knowledge* quadrant does not guarantee success as illustrated by the U.S. Memories alliance. Committed to establishing a billion-dollar joint venture among seven of the largest U.S. semiconductor manufacturers -- IBM, Hewlett-Packard, Advanced Micro Devices, Intel, LSI Logic, National Semiconductor, and DEC -- the alliance intended to produce random access memory chips to counter Japanese dominance of that key commodity. Each member put up $500 million and agreed to incur further debt in order to share knowledge and expertise in an effort to invent the next generation of memory chips. However, dramatic decreases in demand and prices at the end of 1989 sent the venture into a tailspin, and the alliance did not adapt deftly enough. Hence, although the alliance was based on matching (explorative) motives the alliance failed due to a combination of external industry factors and internal competency factors.

In contemporary business, however, relationships based on misfits between partner motives and desired outcome are more prevalent. One example is the Compaq/Silicon Graphics association. Compaq bought a 12% interest in SGI in an attempt to blend SGI's state-of-the-art high-resolution graphics with its broad, low-end commercial market. Not surprisingly, serving both company's needs proved impossible due to the mismatch in organizational culture, product and pricing strategies and the joint venture failed to reach its objectives. Another example is the Alza-Ciba Geigy (CG) alliance, described by Doz (1996) in his analysis of the evolution of cooperation in strategic alliances. Although CG took a majority stake in Alza, coordination and actual integration was held at a minimum (CG had majority representation on Alza's board). According to the alliance, Alza would conduct all research and advanced development of new technologies, whereas CG would handle clinical testing, production and commercialization. Alza simply wanted to handover their products to CG for commercialization, however, CG had a more long-term motive of renewing their product portfolio and eventually acquiring Alza. As the mismatch became apparent

to both firms and they realized how much effective cooperation would require changes in behavior and motivational rationales on their part, they lost confidence in their abilities to make such changes and the alliance was terminated after less than 5 years. From a strict business perspective the alliance can be characterized as successful, however, according to my definition of failure (i.e. sub-optimal in terms of realizing opportunities for long-term performance through knowledge exchange and learning) this alliance clearly did not realize its full potential (see Doz, 1996 for a thorough discussion of the evolution of the Alza-CG alliance).

This paper suggests that misfits, defined as strategic differences in motivational intent, are likely to create tension between partners. These misfits differ according to the underlying rationale (economic or behavioral) and compatible differences between partners may still result in acceptable structures and outcomes through adaptation that is these states are transitional. As indicated in figure 3, however, misfit may (often) lead to *failure* in terms of outcome (meeting the objective of the alliance) or ultimately to termination of the alliance if not resolved. Failure, in this article, is defined as sub-optimal long-term performance for the joint venture as a result of reduced knowledge exchange. The underlying assumption is that firms will benefit more from effective knowledge sharing in the long run compared to ineffective focus on short-term benefits. The possibility that firms may experience differential returns to an alliance is relevant, particularly when considering low levels of integration such as licensing agreements. However, for the purpose of this article, it is assumed that long-term performance of both parties to an alliance, from a knowledge perspective, is closely related to the overall outcome of the relationship. Hence, a strategic misfit is assumed to lower the long-term benefits of the collaboration. For instance, if one partner is seeking to exploit knowledge-related capabilities of its partner, who in turn is strategically motivated by an explorative incentive, the relationship may turn into a game of opportunistic behavior where one partner seeks to exploit (or even cheat) the other partner. This scenario is likely to breed distrust as the misfit between strategic motives becomes apparent to both partners. Over time, the level of

knowledge transfer and learning becomes very low as both partners seek to protect their knowledge bases against exploitation. Ultimately, this leads to poor performance and/or premature termination[6]:

> *Proposition 2: Mismatches in partner motives for strategic alliance formation (strategic misfit) lead to a higher predisposition to failure unless resolved by adapting motives to either exploration or exploitation fit.*

Transitional dynamics

Mismatches between strategic motives for alliance formation may, however, be resolved in other ways than termination and/or failure. If the mismatch stems from *economic rationales*, where both firms initially are motivated by considerations grounded in transaction costs economics or resource dependency (see table 1 and figure 3), such as risk/cost sharing, shaping of competition, or access to market, it will likely resolve itself into the *economies of knowledge* quadrant. Even though one firm is approaching the collaboration from an explorative perspective, the overarching rationale behind the alliance is short-term economic returns and hence the alliance is likely to be structured and managed in relation to this rationale, thereby eliminating the possibility of creating *synergies of knowledge*. As both partners recognize this fact, goals and aspirations will change to reflect this reality.

Examples of this type of transition can be found in the biotechnology industry, where some alliances were formed with exploitative intentions of the biotech firm (access to production and marketing capabilities and/or capital), whereas the pharmaceutical firm was motivated by explorative motives associated with technology development and the opportunity to learn new drug discovery capabilities (Pisano and Mang, 1993). If the scope of the alliance is too broad, or the contractual terms are too restrictive, it may be difficult to realize these goals. To address this issue,

[6] Termination is not necessarily equal to failure as alliances can be terminated for a variety of reasons, one of which is the meeting of its objectives. Premature termination, however, refers to the situation where the alliance is terminated before it has met its objectives due to some kind of conflict among the partners.

the biotech company would seek to retain as many rights as possible, especially rights to manufacture products and to develop future products. Hence, in many instances the result would be clearly defined licensing agreements with little room for knowledge spillover into other projects and, as time progressed, the relationship would move into the *economies of knowledge* quadrant as the pharmaceutical company would realize the benefits of commercializing the licensed product. Thus, while the explorative one-way learning motive (Lane and Lubatkin, 1998) of the pharmaceutical partner did not initially match the exploitative motive of the biotech partner, over time the relationship evolved into a matching (exploit/exploit) relationship due to the match along the economic rationale dimension as many of these alliances were very successful. Hence:

> *Proposition 2a: Strategic alliances based on mismatching motives of exploration and exploitation (strategic misfit), where the dominant rationale behind the alliance is economic, are likely to involve a high level of contractual governance and will transition into the economies of knowledge quadrant over time (assuming they do not fail).*

Conversely, if the intent behind the partnership is based on *behavioral rationales* grounded in institutional and learning theory (see table 1 and figure 3), the relationship may shift into the *synergies of knowledge* quadrant. For instance, some firms collaborate in order to gain legitimacy and increase international experience. Their partner may be approaching the relationship from a different perspective, for instance seeking to access new markets and exploit their partner's superior production technology. However, as time passes the relationship changes and both firms realize the importance of integrating value chains and gaining from each other not only production technology and international experience but also more diverse techniques like human resource management and marketing practices. As each partner modifies its objectives, this relationship will eventually lead to spillover effects to other projects and synergistic gains throughout the value chain. Hence, the relationship will shift toward the *synergies of knowledge* quadrant.

The New United Motor Manufacturing Inc. (NUMMI) JV between GM and Toyota, formed in 1984 and still operating, serves as an example. In NUMMI, the manufacturing and engineering processes are controlled by Toyota. Initially, GM hoped to learn about the efficient production of small cars and transfer its knowledge to GM plants. Hence, GM entered the alliance with a rather short-term perspective of acquiring relevant knowledge and exploiting it in its own production. Toyota, on the other hand, entered the alliance from a more long-term perspective, seeking to learn not from GM but *with* GM and develop new products and capabilities. The fact that they both were motivated by behavioral learning rationales resulted in the realization by particularly GM that expanding the alliance to include more projects and allow further integration and knowledge sharing between the two partners would be beneficial. Consequently, GM and Toyota engaged in a range of relatively un-specified agreements about knowledge (and personnel) exchange. Over time the alliance evolved to include many diverse aspects of car manufacturing and sales and thus moved into the *synergies of knowledge* quadrant:

> *Proposition 2b: Strategic alliances based on mismatching motives of exploration and exploitation (strategic misfit), where the dominant rationale behind the alliance is behavioral, are likely to involve a low level of contractual governance and will transition into the synergies of knowledge quadrant over time (assuming they do not fail).*

The moderating role of procedural governance

While exchange opportunities and mechanisms might be structurally identified by the form of contractual mechanisms chosen, the implementation of how, when, by which means, and to what extent knowledge is embedded and exchanged among the partners typically represents an area of direct organizational influence, whose discretional enactment can sensibly affect the outcome of the relationship. This is consistent with the knowledge governance approach, which is based on the assumption that knowledge processes (i.e. the creation, retention and sharing of knowledge; Argote, 1999) can be influenced through the purposeful deployment of governance mechanisms,

particularly the formal organizational mechanisms, such as (inter)organizational structure, information systems, reward systems and other coordination mechanisms, but also via the informal mechanisms, such as relational capital (Grandori, 2001; Foss, 2007). The role of procedural coordination mechanisms is to govern the relationships within the institutional boundaries defined by means of the contractual governance mechanisms chosen. Decisions on the frequency, timing and directionality of knowledge flows, as well as the means through which these flows occur (e.g., cross-functional team, alliance unit or simply a knowledge management system), identify the operational dimensions of procedural coordination mechanisms. For a given institutional setting, defined by a specific combination of contractual coordination mechanisms, alternative choices of procedural coordination mechanisms are going to impact the outcome of the relationship differently (Sobrero and Schrader, 1998: 594):

> *Proposition 3: The relationship between contractual governance and alliance outcome is moderated by the level of procedural governance.*

Several authors assume that contractual and procedural coordination are closely linked to each other (Pfeffer and Salancik 1978; Helper 1991). Empirical evidence, however, suggests that this is not necessarily the case. Firms might set up institutions for considerable contractual coordination without establishing significant procedural coordination (Joskow, 1987). For instance, in co-specialized alliances, which involve high co-specialization and sensitive knowledge sharing, value is created by exploiting scale and scope efficiencies of mutual specialization (e.g., horizontal alliances in airline, automobile and pharmaceutical industries). This division of labor puts firms at risk of holdup and leakage (Williamson, 1983) and, although they may vary in terms of their strategic perceptions with respect to the dangers of opportunistic appropriation and IP rights management (Oxley, 1999), firms engaged in co-specialized alliances are likely to specify contractual coordination mechanisms to define the legal boundaries of the relationships, including

elaborate exclusivity clauses etc. (Gimeno, 2004). These elaborate contractual agreements, in turn, form the basis of the relationship in terms of articulating the conditions governing transactions and identifying the mechanisms of knowledge transfer. Given the considerable cost of implementing these contractual safeguards, there is little need to develop procedural coordinating mechanisms *ex post* alliance formation. This points to a possible substitution effect between the two types of coordinating mechanisms that is when firms invest (time and resources) in a high degree of contractual specificity they tend to rely less on procedural mechanisms of governance. This choice is partially driven by the attributes or characteristics of the knowledge to be shared by the allies, as well as task complexity and the underlying strategic motivation of the alliance:

> *3a: The relationship between matching exploitation motives with high contractual governance and economies of knowledge will be stronger when the level of procedural governance is low.*

By the same token, there are several examples of firms having established a high level of procedural coordination without intense contractual control (Best 1990). Carter and Miller (1989), for example, show how in the absence of highly specified contracts, frequent and bilateral communication between vendors and buyers limited the occurrence of quality problems in the materials delivered. Similarly, in R&D alliances, firms must commit a greater amount of information and be willing to share sensitive design information through engineer-to-engineer communication in order to improve innovation, process capability and performance. Ring and Rands (1989) document how NASA and 3M were able to articulate their (exploratory) goal for common projects on microgravity experiments and subsequently worked through the implementation of their collaboration via adaptive coordinating mechanisms based on relational quality and mutual exchange of knowledge. The ability to employ adaptive procedural governance mechanisms is critical to achieving synergistic outcome in the dyadic relationship (Kanter 1994; Madhok and Tallman 1998). According to the relational competency framework, dyadic firms within a long-term cooperative relationship are in a better position to (1) build trust and a social-

economic proximity, (2) enhance learning and knowledge dissemination, and (3) develop highly idiosyncratic interaction routines that allow them to share knowledge and collaborate more effectively (Dyer and Singh, 1998; Kale, Singh and Perlmutter, 2000; Kogut and Zander 1992; Powell, Koput and Smith-Doerr 1996). These long-term relationships are typically characterized by low levels of contractual specificity, high levels of task uncertainty, and "human co-specialization" (Dyer, 1996) as partner firms seek explorative gains. There is an expectation of long-term, if not permanent, ties between collaborating firms, based on shared assets, co-development, interchange of personnel, and exchange of know-how. Often, these relationships are bidirectional in learning and dependence. Contracts, while they exist, are relatively unimportant and incomplete. In the Williamsonian (1979) sense of incomplete contracts, the exigencies of the partnership, evolving technology, new designs over which new negotiations will take place, and other imponderables beyond the ken of ''bounded rationality'', will lead the alliance well beyond what contract terms can ever envisage. Hence, in alliances motivated by explorative long-term learning considerations, characterized by high levels of task uncertainty, high levels of procedural governance is likely to enhance synergies of knowledge:

> *3b: The relationship between matching exploration motives with low contractual governance and synergies of knowledge will be stronger when the level of procedural governance is high.*

7. CONCLUSION AND DIRECTIONS FOR FUTURE RESEARCH

As managers and researchers struggle to find patterns and indications of how to effectively manage complex collaborative arrangements, the need to understand the dynamic evolution of these organizational forms increase. The focus of this article was on the relationship between conditions for alliance formation and outcome and the simultaneous mediating and moderating impact of different types of governance. The objective was to tease out whether specific combinations of contractual and procedural coordination, given specific strategic fit, explain performance differentials in terms of knowledge outcome. While contractual governance has long been recognized as an important vehicle for structuring inter-organizational relationships, its role has often been treated in an atomistic fashion, separated from its indirect mediating influence on performance and, as argued in this article, its interaction with procedural governance mechanisms during the evolution of the alliance relationship. Contractual and procedural governance are not orthogonal (Parkhe, 1993b) and limiting research to one coordinating mechanism at the time, without proper estimation of combined effects, is inappropriate (Sobrero and Schrader, 1998).

The importance of the underlying motivational rationale and strategic fit is often neglected in alliance studies or treated without simultaneous inclusion of performance measures and interaction terms with governance mechanisms. In addition, the adaptive nature of relational exchange between alliance parties over time is rarely included in alliance research. This leaves decision makers without real evidence as to the appropriateness of particular governance solutions given different types of strategic fit. Nor does it provide any guidance as to how to resolve potential situations of misfit. In many organizations, the group initiating inter-firm relationships and involved in the drafting of the original contracts is quite different from the group in charge of the implementation of the agreement. The contractual coordination mechanisms are frequently negotiated by top-management and a group of lawyers, while the setting up of procedural coordination is left to business-unit managers, who have usually been involved in similar alliances in the past (Thomas

and Trevino 1993). Whenever such functional separation is not carefully bridged, however, the negotiation and the implementation aspects of inter-firm relations are *de facto* detached, increasing the chances that the relationship will fail (Sobrero and Schrader, 1998: 586).

The proposed framework in figure 3 leads to several propositions that may guide future research in the pursuit of a more complete understanding of the interdependent roles of fit and contractual and procedural governance in strategic alliances. It may also provide strategic decision makers with a better framework for evaluating the potential tradeoff or substitution effects of different types of coordinating mechanisms. In addition, the notion of strategic fit and the potential transitional dynamics may offer alliance managers a longitudinal perspective on how the structuring of collaborative relationship may change during the life-cycle of the alliance.

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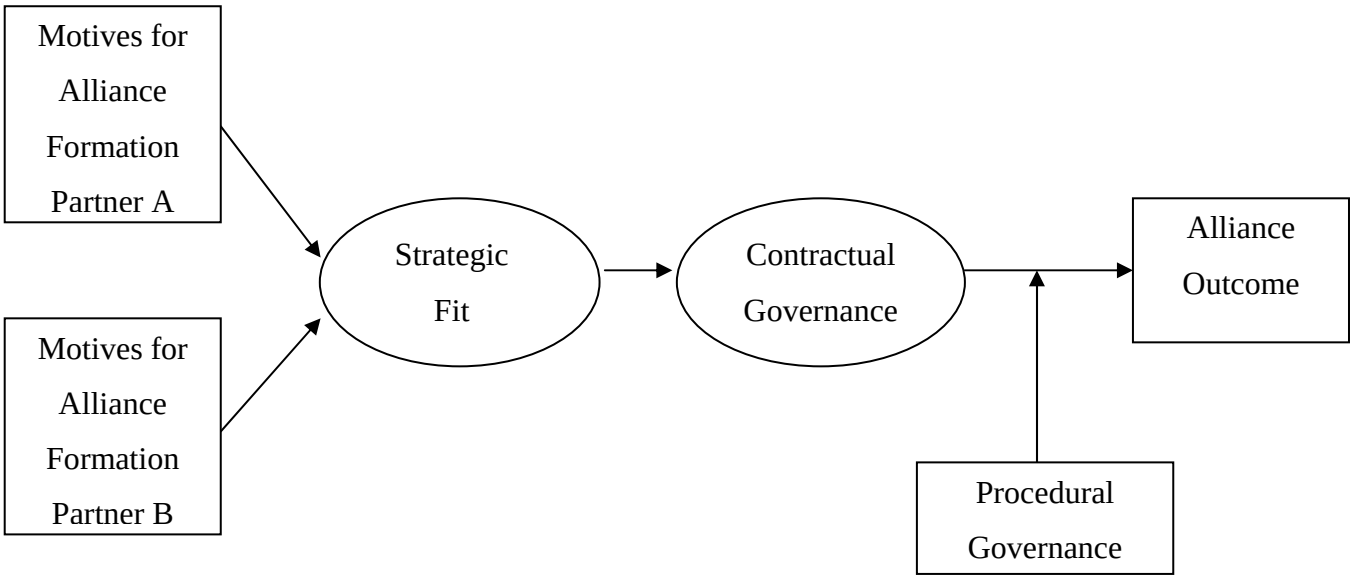
Figure 1: The Role of Strategic Fit and Governance in Determining Alliance Outcome



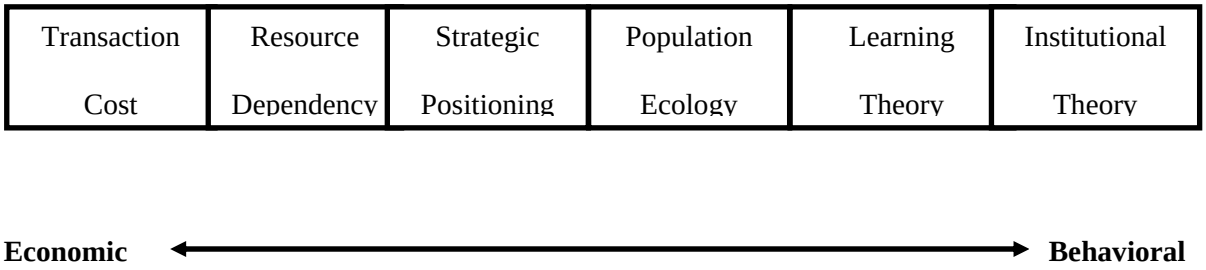
Although a host of environmental as well as internal factors may influence alliance performance, the model assumes away these influences since the focus is on strategic fit and governance effects on alliance outcome in terms of meeting the objectives pertaining to knowledge, which are directly under the control of alliance managers (Hennart, 2006)

TABLE 1:
Strategic Motivation for Alliance Formation

STRATEGIC MOTIVE	EXPLOITATION	EXPLORATION	REFERENCES
Risk/Cost Sharing (TCE)	- Reducing total (asset) risk and (investment) cost - Product rationalization and thus reducing costs through economies of scale, while avoiding risks of full-scale merger	- Enabling faster market entry and exploration - Enabling product diversification into attractive yet unfamiliar business areas and thus reducing market risks	• Porter & Fuller (1986) • Contractor & Lorange (1988)
Transfer of Knowledge-Related Capabilities (TCE and OL)	- Focus on matching existing (explicit) skills and resources (compatibility) - Focus on needed (explicit) skills and resources (complementarity)	- Focus on collaborative utilization of (explicit and tacit) skills and resources - Focus on creating new capabilities through *fusing* of skills and resources	• Harrigan (1985) • Dussauge et al. (2000) • Geringer (1988) • Kogut (1988) • Hamel (1991) • Grant (1996)
Shaping Competition (SP)	- Defensive ploy aimed at reducing competition - Offensive strategy aimed at increasing competition	- Co-opetition (combining cooperation and competition) aimed at generating new value (change in value chain design)	• Porter & Fuller (1986) • Contractor & Lorange (1988)
Access to Market (SP)	- Conform to host government policies and regulations - Exploit local market knowledge - Exploit distribution channels	- Redesign and integrate all relevant aspects of value chain in order to maximize strategic flexibility	• Beamish (1988) • Yan & Luo (2001) • Contractor & Lorange (1988)
Facilitate Internationa-lization (OL and SP)	- Increase international experience - Speed up international market entry	- Develop global strategy - Develop global organization - Internationalize value chain	• Beamish (1988) • Geringer (1988) • Contractor & Lorange (1988) • Gannon (1993)
Strategic Linkages (TCE and RD)	- Vertical quasi-integration (as means of control of inputs) with each partner contributing one or more different elements in the production and distribution chain	- Total integration (as means of generating added value) of relevant knowledge-related capabilities and resources throughout the value chain	• Hennart (1988) • Dussauge et al. (2000) • Sakakibara (1997)
Gaining Legitimacy (PE and IT)	- Homogenization through competitive and institutional isomorphism	- Heterogenization and autonomy through isolation and independence	• Meyer & Rowan (1977) • DiMaggio & Powell (1983) • Hennan & Freeman (1977)

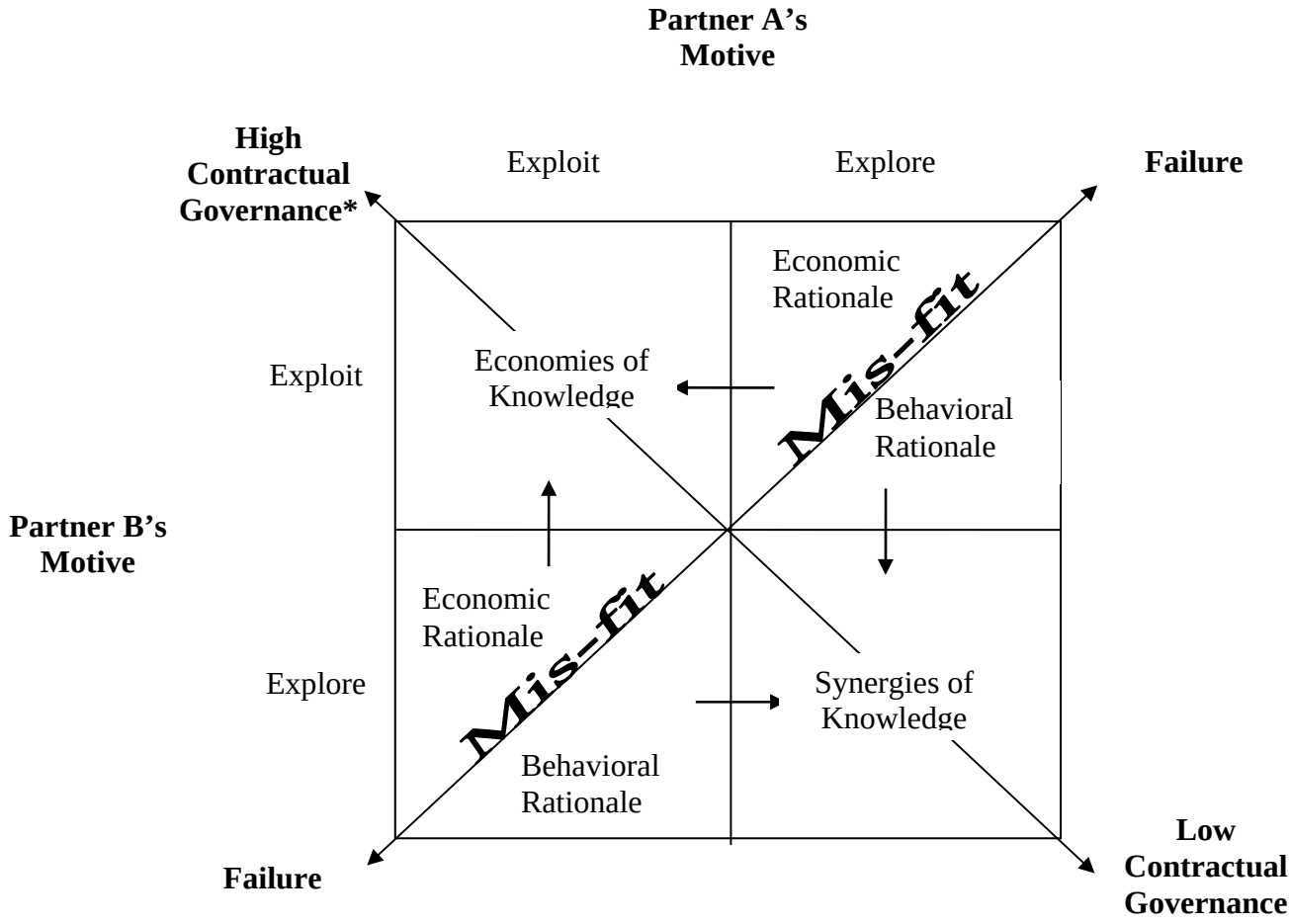
Note: TCE = Transaction Cost Economics; OL = Organizational Learning; SP = Strategic Positioning; RD = Resource Dependency; PE = Population Ecology; IT = Institutional Theory

Figure 2: Theoretical Foundations of Alliance Formation



Source: Adapted and modified from Barringer and Harrison, 2000

Figure 3: The Relationships between Fit, Governance and Alliance Knowledge Outcomes



* Contractual governance refers to the level of contractual specificity.

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