Governance Structures of Alliances: Transaction Costs versus Competence Perspective

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ABSTRACT

In the modern economy, characterized by globalization, competitive intensity and technological complexity and dynamism, conventional transaction costs approach is facing with a lot of limitations and challenges; competence-based approach seems to be better equipped to address the structural preference of alliances. This paper first explores the assumptions and limitations of transaction costs approach, and derives propositions from TCE. We argue that transaction cost approach overemphasizes the exchange-side analysis and neglects the production-side analysis, such as learning, capability, and innovation. Thus, within the competence perspective, we discuss governance structures of alliances through four important aspects: the attributes of partner’s capabilities, competence developing strategy, prior alliance experiences, and innovation types. Based on these discussions, we further derive several propositions, and hope to provide some research directions for future empirical studies.

INTRODUCTION

The nature of competition has become much more global, the pace of competition has become much more intense and technology has become highly complex and dynamic. In this situation, the boundaries decisions of the firm become more and more important, and, apart from pure “hierarchy” and “market”, firms have various choices of governance structures of alliances. Firms that bring the wrong business activities within their boundaries risk losing strategic focus and becoming bloated and bureaucratic. Firms that fail to bring the right business activities within their boundaries risk losing their competitive advantages and becoming “hollow corporations.” (Barney, 1999).

In the study of the governance structures of alliances, conventionally, TCE (transaction costs economics) provide the earliest dominant explanations. In general, TCE has focused on the comparative transaction costs of alternative organizational structures, including, paradigmatically, the choice between firms and markets. Firms and other institutions are alternative bundles of contracts, understood as efficient mechanisms for creating and realigning incentives.

In contrast, from the competence perspective, the existence, structure and boundaries of the firm are explained in some way by individual or team competence—skill and tacit knowledge—that are in some way fostered and maintained by that organization (Hodgson, 1998). The very essence of capabilities/competences is that they cannot be readily assembled through markets (Teece and Pisano, 1994).

In comparing TCE (transaction costs economics) with the competence approach, TCE concentrate essentially on incentive governance, while competence perspective focuses on the problem-solving dimensions of organizations, such as learning, capability, and innovation. The two ‘pure’ theories might provide valuable clues to how empirical organizations trade off problem-solving exploration against economizing governance and how that affects corporate performance (Madhok, 1999).

In order to meet the multiplicity of pressures which need to be managed simultaneously in an highly complex and dynamic environment—geographic, product, market, technological, competitive—Transaction costs considerations may be becoming less primary a concern, and capability considerations become much more significant in shaping firm behavior (Madhok, 1998). Hence, the following discussion will explicate the assumptions and limitations of TCE, and discuss the competence perspective in four aspects. Through the discussions of transaction costs and competence perspective, several propositions will be derived.
TRANSACTION COST PERSPECTIVE

In the study of governance structures of alliances, transaction cost economics, which dominated in 1980s, provides the earliest theoretical explanations. According to Coase’s (1937) initial propositions, Firms and markets are alternative governance structures that differ in their transaction costs. Under certain conditions, the costs of conducting economic exchange in a market may exceed the costs of organizing the exchange within a firm. In addition, from the contractual view, he specified that transaction costs are the “costs of running the system” and include ex ante cost as drafting and negotiating contracts and ex post cost as monitoring and enforcing agreements.

Main assumptions of TCE—Bounded rationality and opportunism

Inspired by Coase’s original propositions, Williamson developed a micro analytical framework, which helped to refine the concepts of transaction costs. First, he makes two main assumptions of human behavior—Bounded rationality and opportunism.

Bounded rationality is the assumption that decision makers have constraints on their cognitive capabilities and limits on their rationality. Although decision makers often intend to act rationally, this intention may be circumscribed by their limited information processing and communication ability (Simon, 1957). Under the assumption of bounded rationality of the firm, the problem of adaptation arises. An adaptation problem is created when a firm whose decision makers are limited by bounded rationality has difficulty modifying contractual agreements to changes in the external environment. Thus, the antecedents of the adaptation problem are bounded rationality and environmental uncertainty (Rindfleisch and Heide, 1997).

Opportunism is the assumption that, given the opportunity, decision makers may unscrupulously seek to serve their self-interests, and that it is difficult to know a priori who is trustworthy and who is not (Barney, 1990). Opportunism poses a problem to the extent that a relationship is supported by specific assets whose values are limited outside of the focal relationship. Essentially, the effect of specific assets is to create a safeguarding problem, because market competition no longer serves as a restraint on opportunism. A safeguarding problem arises when a firm deploys specific assets and fears that its partner may opportunistically exploit these investments. Thus, the antecedents of the safeguarding problem are opportunism and asset specificity.

Key dimensions of transaction costs—asset specificity and uncertainty

Based on the two assumption of human actor, Williamson goes a step further to operationalize the concept of transaction costs into two key dimensions—asset specificity and uncertainty.

Asset specificity refers to the transferability of the assets that support a given transaction (Williamson, 1985). Assets with a high amount of specificity represent sunk costs that have little value outside of a particular exchange relationship. Williamson (1991) has identified six main types of asset specificity: (1) site specificity, (2) physical asset specificity, (3) human asset specificity, (4) brand name capital, (5) dedicated assets, and (6) temporal specificity.

Uncertainty, according to Williamson’s (1985) original ideas, can be further conceptualized into two types: environmental and behavioral uncertainty. Environmental uncertainty refers to “unanticipated changes in circumstances surrounding an exchange” (Noordewier, John, and Nevin, 1990). The primary consequence of environmental uncertainty is an adaptation problem, that is, difficulties with modifying agreements to changing circumstances. Unless a comprehensive contract can be written, which specifies in advance the required and associated terms of trade, there are considerable transaction costs associated with ongoing renegotiations.

In addition, Uncertainty might arise by partner’s behaviors, which called behavior uncertainty. Behavioral uncertainty arises from the difficulties associated with monitoring the contractual performance of exchange partners. The effect of behavioral uncertainty is a performance evaluation problem, that is, difficulties in verifying whether compliance with established agreements has occurred. Even if the relevant aspects of a firm’s operations can be measured, the information gathering and processing costs incurred may be substantial.
**Transaction costs and governance structures of alliances**

Conceptually, pure hierarchically integrated structure and market transactions are located extremely in the two ends of the spectrum of governance structures, and there should be hybrid forms of governance structure for alliances between the two. Heide (1994) specifies two types of hybrid governance mechanisms as unilateral and bilateral. Both types of governance structures are alternatives to market transactions and vertical integration for presenting viable safeguarding mechanisms.

Unilateral hybrid governance mechanisms provide a way to safeguard specific assets by solidifying ex ante agreements with an exchange partner. In other words, unilateral hybrid governance mechanisms bring an alliance to a contractual-based framework, under which obligations and rights can be specified clearly and protected legally. For instance, a firm can forge an alliance by entering long-term contractual arrangements or entering formal contracts that build exit barriers, exclusive dealing, and financial incentives into the relationship.

In contrast to the unilateral mechanisms, bilateral hybrid governance structures appear to provide a firm with a way to safeguard its specific assets by developing closer ties with its exchange partners. Heide and John (1990) find that suppliers that have specific assets invested in a manufacturer establish close ties with that manufacturer by means of joint action and expectations of continuity. For example, a firm can choose to form an alliance by entering into equity agreements, which embody hierarchical control and close relationship.

From transaction costs perspective, firms resort to equity agreements in order to economize on transaction costs when there is a non-negligible risk of opportunism, but not so much as to mandate hierarchical internalization: otherwise less expensive non-equity modes are used (Hennart, 1988; Kougut, 1988; Williamson, 1991)

**Proposition 1:** According to transaction costs perspective, the higher transaction costs, as caused by high degree of assets specificity or uncertainty, the higher the possibility a firm would resort to equity-based governance structures of alliances.

**Proposition 1a:** the higher level of assets specificity, the higher the possibility a firm would resort to equity-based governance structures of alliances.

**Proposition 1b:** the higher level of environmental uncertainty, the higher the possibility a firm would resort to equity-based governance structures of alliances.

**Proposition 1c:** the higher level of partner’s behavioral uncertainty, the higher the possibility a firm would resort to equity-based governance structures of alliances.

**THE LIMITATION OF TRANSACTION COSTS PERSPECTIVE**

One major weakness of the TCE construct in the alliance domain is that it overemphasizes individual parties’ minimization of transaction costs, while holding other factors constant (Colombo, 2003). We argue that transaction costs perspective overemphasize the exchange-side determinants on the governance structures of alliances and neglects the production-side considerations.

First, transaction costs neglects the technology and innovation impact on the governance structures of alliances. In transaction cost analysis, different governance modes are compared in the context of a given technology. Production costs are assumed to be given and do not differ across governance or transaction modes. However, technologies are often linked to transaction modes and structures of governance (Hodgson, 1998). The neglect of technological innovation and dynamic change is indeed a most serious problem for the equilibrium-oriented approach (transaction costs approach) (Nooteboom, 1992). The failure to incorporate innovation is a serious weakness of the static, transaction cost approach, and that it must be supplemented by bringing “innovation as a process of interactive learning” to the center of analysis (Hodgson, 1998).

Secondly, transaction costs perspective neglects the effect of the learning and capability of a firm in explaining the governance structures. Williamson (1999) admits that transaction costs economics “makes only limited contact with the subject of learning”, and indicates that we may be mistaken about hazards and may learn about them as events unfold. In transaction costs perspective transactions cost economics does not focus on the capabilities of a firm or on the capabilities of its potential partners when deciding which economic exchanges to include within a firm’s boundary and
which to outsource (Barney, 1999).

Transaction costs approach is relatively a static and equilibrium-oriented approach, which cannot explain the dynamic efficiency issues of governance structures such as learning, capability, innovation. Because of uncertainty, dynamic efficiency is essentially about learning and innovation and cannot be reduced simply to static terms. Hodgson (1988) specified that consideration of static rather than dynamic efficiency is rooted in the comparative statics of Williamson and Coase. Yet the ability of the firm to foster human learning, technological innovation, and research and development may be a central reason for its survival. Moreover, Nooteboom (2004) also proposed that today innovation and learning are crucial, and should be in the core of theory. Thus, we argue that the theoretical focus on the choice of the governance structures of alliances should shift from static efficiency to dynamic efficiency, and a more dynamic theory should be developed.

COMPETENCE PERSPECTIVE

Form the discussion above, the boundaries of the corporation need to be understood not only in terms of transaction cost considerations, but also in terms of learning, path dependencies, technological opportunities, selection, and complementary assets (Dosi, 1994). Thus, we will then discuss the governance structures of alliance from the competence perspective.

Looking back upon the literature, the influential article by C. K. Prahalad and Gary Hamel on ‘The Core Competence of the Corporation’ (1990) was the first to bring the idea of core competence into the agenda of governance structures of alliances. Prahalad and Hamel (1990) conclude that ‘too many companies have unwittingly surrendered core competencies’ by engaging in outsourcing. According to Richard Langlois and Nicolai Foss (1999), there are a small but growing list of authors who have begun self-consciously referring to their work as lying within the confines of a ‘capabilities,’ ‘dynamic capabilities,’ or ‘competence’ approach (Langlois, 1992; Langlois, 1999; Kogut and Zander, 1992; Foss, 1993; Teece and Pisano, 1994).

Authors within the competence perspective have pointed out that strategic alliances often are instrumental to extending a firm’s collection of distinctive capabilities through inter-organizational learning (Prahalad and Hamel, 1990; Conner and Prahalad, 1996; Grant, 1996; Teece and Pisano, 1997; Hodgson, 1998; Loasby, 1998). Authors in the competence perspective also contend that alliances are often aimed at expanding a firm’s set of distinctive capabilities through inter-organizational learning; this especially applies to alliances that involve technological activities (Kogut, 1988; Hamel, 1991; Hodgson, 1998; Loasby, 1998).

In the following sections, within the competence perspective, we will discuss the governance structures of alliances from four aspects: the attributes of partner’s capabilities, competence developing strategy, prior alliance experiences, and innovation types.

The attributes of partner’s capabilities

Barney (1999) suggests that the attributes of the capabilities a firm is trying to gain access to can have an important impact on the firm’s boundary choices. From the point of production process, production can be broken down into various stages or activities. Some activities are similar, in that they draw on the same general capabilities. Activities can also be complementary (in both a technical and an economic sense) in that they are connected in the chain of production and therefore need to be coordinated with one another. Likewise, when a firm chooses to forge an alliance with its partners, the attributes of partners’ capabilities can be distinguished into two types: similar and complementary capabilities.

A partner with similar capabilities implicates that it has relevant expertise in the same fields with the focus firm. If partners have developed technological expertise in the same fields, mutual learning will be easier with all else equal, as firms are better able to absorb each other’s knowledge. Under such circumstances, the need for sophisticated coordination mechanisms and the amount of the associated relation-specific investments are considerably reduced and so is the likelihood of resorting to equity modes (Colombo, 2003). Instead, when partners’ capabilities is dissimilar with the focus firm, because of the extreme specificity and tacitness of much productive knowledge, one firm may have
difficulties understanding another firm's capabilities (Kogut and Zander 1992, Winter 1988). In this setting, the costs of making contracts with potential partners, of educating potential licensees and franchisees, of teaching suppliers what it is one needs from them, etc., become very real factors determining where the boundaries of firms will be placed (Langlois, 1998).

**Proposition 2:** the higher level of similarity of partner’s capabilities, the higher the possibility a firm would resort to contract-based modes of alliances.

A partner with complementary capabilities implicates that it has expertise in the different fields from the focus firm, and those complementary capabilities, though dissimilar, still contribute to firm’s success. Teece (1986) proposed that the successful commercialization of an innovation requires that the know-how be utilized in conjunction with other capabilities or assets. Services such as marketing, competitive manufacturing, and after-sales support are almost always needed. These services are often obtained from complementary assets which are specialized.

The relationship between partner’s complementary capabilities and the governance structures of alliances is not straightforward, and must be contingent on other factors. First, Milgrom and Roberts (1990) specified that complementarity is clearly an increasingly important theme in today’s economics of organization, and suggested that strongly complementary assets should be brought under common ownership (Milgrom and Roberts 1992). In contrast, Teece (1986) argued that Innovator can obtain advantage through signing a contract, such as license, with independent suppliers, manufacturers or distributors. The innovator will not have to make the upfront capital expenditures needed to build or buy the assets. This reduces risks as well as cash requirements. Moreover, Contracting rather than integrating is likely to be the optimal strategy when the innovators appropriability regime is tight and the complementary assets are available in competitive supply (Teece, 1986). We argue that when a firm decides to integrate external complementary capabilities into its operation, it might lack the requisite or relevant capabilities to implement the strategy. In situations where the firm lacks the requisite or relevant capabilities, even though it can learn to operate in new contexts, it may be a daunting task to do so within an acceptable timeframe or cost. Thus, the outsourcing strategy might be a better choice in stead of integration. We synthesize the two opinions and derive the following propositions.

**Proposition 3:** When a firm’s financial constraint is tight, the higher level of complementarity of partners’ capabilities, the higher the possibility a firm would resort to contract-based modes of alliances.

**Proposition 4:** When a firm’s financial constraint is loose, the higher level of complementarity of partners’ capabilities, the higher the possibility a firm would resort to equity-based modes of alliances.

**Competence developing strategy**

Firm competences have limits of scale and scope (Hodgson, 1998). More fluid market and exchange relationships may stimulate the firm to develop new capabilities. New competences have to be managed and organized for much of their potential to be realized. According to the scale and scope of a firm’s competences, we propose that the competence development strategies can be classified into two types: broad and narrow business strategy.

When a firm is aggressively pursuing ‘economies of scale’ or ‘economies of scope’, it is undertaking the broad business strategy. From business history view, Chandler (1962) focuses on the new forms of business organization that were needed in order to exploit the potential for ‘economies of scale and scope’. Chandler came to stress what he called the ‘three-pronged investments’ in large-scale manufacturing facilities, marketing, and distribution systems, and modern management methods. Companies that were among the first to commit to such investments often dominated their industries for decades thereafter. We argue that when adopting broad business strategy, a firm is trying to expand its boundaries, and will be involved in a certain level of vertical or lateral integration. Thus, we derive the following proposition.

**Proposition 5:** the stronger the inclination of a firm adopting broad business strategy, the higher the possibility a firm would resort to equity-based modes of alliances.

When a firm does not pursue ‘economies of scale’ or ‘economies of scope’ and maintain smaller business boundaries, it is undertaking the narrow business strategy. Rotemberg and Saloner (1994) suggest that firms may be best off choosing narrow strategies. Specifically, they use the incomplete-contracts framework to argue that a firm may choose a narrow strategy (and thus ignore profitable opportunities) because strategic breadth leads to implementation
problems ex post that distort ex ante incentives. They propose that ‘increasing returns to specialization’ (because of learning advantages from concentrating on well-defined capabilities) may be an independent reason for narrow strategies. In addition, because of what are effectively cognitive constraints, all organizations must specialize; and, since the chain of production in an advanced economy requires a diversity of very different capabilities, the costs of integrating across many links in that chain are necessarily high, and firms must rely on various kinds of market and hybrid arrangements to coordinate their activities even in the face of contractual hazards. Thus, we derive the following proposition.

**Proposition 6:** the stronger the inclination of a firm adopting narrow business strategy, the higher the possibility a firm would resort to contract-based modes of alliances.

**Prior alliance experiences**

The firm’s past experience in a particular activity is important in determining whether a firm will undertake the activities internally or collaborate (Pisano, 1990). Strategies which require know-how in areas where the firm lacks adequate experience can activate the capability constraint and can make it risky to pursue the strategy alone since, not only does a firm incur substantially higher costs of information acquisition, interpretation and absorption (Carlson, 1974) but development and integration of new knowledge is a gradual and incremental process which would be more costly and less efficient relative to competitors who are more experienced in this domain (Penrose, 1980).

A firm’s prior pattern of transferring know-how, whether through subsidiaries or through a partnership, influences its subsequent transfers. With more experience at transferring know-how through collaborative relationships, mechanisms for managing such relationships, and coordinating inward and outward knowledge flows within them, become routinized (Mody, 1993). Moreover, development of similar routines makes the organization and management of boundary spanning relationships, and related information flows, easier, less costly and more beneficial. This increases the propensity towards entering into such relationships subsequently. Therefore, firms with successful prior experience with JVs would be favorably inclined towards JVs (Madhok, 1998).

**Proposition 7:** the more firms has prior alliance experiences in equity-based alliance, the higher the possibility a firm would resort to equity-based modes of alliances.

**Proposition 8:** the more firms has prior alliance experiences in contract-based alliance, the higher the possibility a firm would resort to contract-based modes of alliances.

**Innovation types**

When the innovation is not only of a more radical nature but is also systemic, which involves changes in adjacent stage of the value chain, coordination problems arises and vertical integration is undertaken to eliminate such problems (Teece, 1986). Integration is seen as a response to the coordination problems that economic change gives rise to (Langlois, 1999). Integration is applicable to economic organization in the context of change. It may be particularly applicable under two different circumstances: (1) in the case of systemic innovations in already established value chains, and (2) in the case of the creation of new stages in the value chain or the creation of a whole value chain from scratch. Foss (1993) concludes that the competence perspective as applied to economic organization is particularly relevant in the context of the organization of innovation, particularly where the relevant innovation is radical—breaking with existing competences—and systemic, requiring coordination among adjacent stages in the value chain.

**Proposition 9:** the more the innovation is radical and systemic, the higher possibility a firm would resort to equity-based alliances.

**CONCLUSION AND FUTURE RESEARCH DIRECTIONS**

In this article, we first discuss the assumptions and dimensions of transaction cost perspective, and indicate the limitation of transaction cost approach. From the TC-based logic, the efficient management of transactions, under the assumption of opportunistic behavior, is the source of a firm’s competitiveness, with the primary concern being the minimization of TC and the fit between the transaction characteristics and the form of governance (Madhok, 1999).
Higher level of assets specificity and uncertainty results in high transaction costs, and thereby firm will resort to equity-based alliances, which characterized as hierarchical and integrative. In addition, we also discuss the limitation of transaction cost approach, which including negotiating the considerations of technology, innovation, learning, and capability.

Secondly, within the competence perspective, we further discuss the impact on the governance structures of alliances through four aspects: the attributes of partner’s capabilities, competence developing strategy, prior alliance experiences, and innovation types. We also derive several propositions form the discussions. First, the higher level of similarity of partner’s capabilities, the higher the possibility a firm would resort to contract-based modes of alliances. Besides, when a firm’s financial constraint is tight, the higher level of complementarity of partners’ capabilities, the higher the possibility a firm would resort to contract-based modes of alliances; when a firm’s financial constraint is loose, the higher level of complementarity of partners’ capabilities, the higher the possibility a firm would resort to equity-based modes of alliances. Second, the stronger the inclination of a firm adopting broad business strategy, the higher the possibility a firm would resort to equity-based modes of alliances; the stronger the inclination of a firm adopting narrow business strategy, the higher the possibility a firm would resort to contract-based modes of alliances. Thirdly, the more firms has prior alliance experiences in equity-based alliance, the higher the possibility a firm would resort to equity-based modes of alliances; the more firms has prior alliance experiences in contract-based alliance, the higher the possibility a firm would resort to contract-based modes of alliances. Forth, the more the innovation is radical and systemic, the higher possibility a firm would resort to equity-based alliances.

By and large, transaction costs approach is facing with a lot of challenges and limitations. For instance, Kogut and Zander (1993) contend that a major weakness of the TC-based theory is that the overriding assumption of opportunism ‘overdetermines’ firms’ boundary decisions. This does not mean that TC-related considerations are not relevant or important but, rather, that in today’s competitive and dynamic environment, capability-related concerns may be dominating TC-related ones in firms’ decisions regarding the governance of their boundaries (Madhok, 1997). Hence, we suggest that transaction costs and competence perspective are complementary, which embodies the exchange-side and production-side analysis, and both could have great contributions to the explanations and predictions of the governance structures of alliances.

In this paper, we discuss the governance structures of alliances from four aspects. Because competence perspective is still not yet well-developed, future research should attempt various dimensions or variables within competence perspective. There are several directions for future research.

First, future research may explore the knowledge protection issues within competence perspective. While the possibility of unintended leakages does exist (Hamel, 1991), and needs to be protected against, at the same time some of the concerns regarding leakage and increased TC may need to be managed or traded off against the potential gains from collaboration (Mody, 1993). Moreover, Hodgson (1998) specified that the principal factor explaining the existence, boundaries, nature and development of the firm is the capacity of such an organization to protect and develop the competences of the groups and individuals contained within it, in a changing environment. Thus, knowledge protection issues is worthy of paying attention with.

Secondly, learning and knowledge transfer issue should be taken into considerations. An alliance may simply be instrumental to transferring existing knowledge from one firm to another, thus allowing the recipient firm to internalize partner’s capabilities and to use them in its own operations (Khanna, 1998). The organizational question is whether new capabilities are best acquired through the market, through internal learning, or through some hybrid organizational form (Langlois, 1999). The creation of a capability may be “path dependent.” To create a capability, a firm must go through a long, difficult learning process. When no way to short-circuit this learning process exists, it is said to be path dependent (Barney, 1999).

Thirdly, future research should try to operationalize the important concepts of competence perspective, and conduct some empirical studies to compare the relative explanatory power of transaction costs and competence perspective. Moreover, in order to verify the robust of theory, other contextual variable should also be incorporate into consideration.
REFERENCES


