

THE ROLE OF LAWYERS IN STRATEGIC ALLIANCES

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INTRODUCTION

Recently, the frequency of firms participating in inter-firm collaborations has increased dramatically. Estimates of the increase in domestic and international firm collaborations over the last twenty years vary in magnitude, but not in sign.¹ Additionally, alliances appear to be an increasingly important strategy tool, according to recent estimates of firm revenues from such collaborative activity.² These trends likely reflect the perceived benefits from collaboration. Firms may transfer technologies, achieve economies of scale in manufacturing, marketing or R&D, and access capabilities that may be difficult to develop in-house.³ Firms may even ally with competitors to set standards in an industry or to meet difficult time goals for development of new technologies.⁴

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¹ See KAREN J. HLADIK, INTERNATIONAL JOINT VENTURES: AN ECONOMIC ANALYSIS OF U.S.-FOREIGN BUSINESS PARTNERSHIPS (1985) (providing analysis of the characteristics and history of international partnership agreements); Michael Hergert, & Deigon Morris, *Trends in International Collaborative Arrangements*, in COOPERATIVE STRATEGIES IN INTERNATIONAL BUSINESS 99 (Farok J. Contractor & Peter Lorange ed., 1988) (analyzing the growth and purpose of collaborative agreements between international partners); Ellen R. Auster, *International Corporate Linkages: Dynamic Forms in Changing Environments*, COLUMBIA J. WORLD BUS., Summer 1987, at 3 (providing an overview to the increase in international corporate linkages); David C. Mowery et al., *Strategic Alliances and Interfirm Knowledge Transfer*, STRATEGIC MGMT J., 77 (Dec. 1996) (examining the effect international collaborative agreements have on the transfer of interfirm knowledge).

² For example, Harbison and Pekar, Jr. find that revenues from alliances have more than doubled during the 1990s, increasing to twenty one percent by 1997, for the top one thousand US firms. Such revenues were expected to increase further to thirty five percent of total by the end of 2002. J. R. HARBISON & P. PEKAR, JR., SMART ALLIANCES: A PRACTICAL GUIDE TO REPEATABLE SUCCESS I (1998).

³ Other cited benefits include: risk management, internalization of research spillovers, and access to a wider know-how network. Mary Tripsas et al., *Discouraging Opportunistic Behavior in Collaborative R & D: A New Role for Government*, 24 RES. POL'Y 367, 369 (1995).

⁴ An illustration of firms allying to meet difficult time targets includes the recent alliance between Ford, General Motors, and DaimlerChrysler (along with several suppliers, universities, and branches of the U.S. Federal Government) for the development of a more fuel-efficient vehicle. The "Partnership for a New Generation of Vehicles" (PNGV) was formed to meet a government mandate to produce an automobile capable of eighty miles per gallon by 2004.

These types of benefits often extend beyond the life of the alliances, as firms learn skills and gain competencies from their partners.⁵

Realizing such benefits, however, is far from assured. Firms entering alliances face considerable moral hazard problems since partner behavior is often unobservable and the costs of opportunism are potentially high. Allying firms cannot be sure that their partners are contributing equitably to their alliance activities. Partners may, for example, contribute fewer or lesser quality inputs to the alliance than originally agreed. Allying firms also risk unintended transfer of valuable technologies or knowledge to their partners, given imperfect intellectual property rights protection. Firms are naturally concerned about creating a (stronger) competitor if too much valuable knowledge is transferred to partners. Differing managerial styles as well as competing interests and expectations may further compound the difficulties of coordinating across organizational boundaries. These challenges, if inadequately dealt with, can thwart attempts to create the cooperative environment necessary to achieve collaborative benefits.

Fortunately, there exists a means to deal with these coordination difficulties — alliance structure. Formal structure provides a means for firms to set out partner rights and obligations, articulate alliance goals and expectations, align incentives, and provide a framework for decision making and adapting to unforeseen contingencies. In this sense, structure can reduce some of the uncertainty in collaboration and give the partners some confidence that the spirit of the agreement will be upheld, ultimately improving chances for alliance success.

This Paper considers the role of structure in strategic alliances. Despite a burgeoning literature on alliances,⁶ several fundamental questions remain unanswered. For example, what is alliance structure and how is it chosen? How do prior business relationships between firms affect this choice of structure? Does the

United States Council for Automotive Research, *PNGV Faces Challenge to Invent 'Super Car,'* at <http://www.uscar.org/pngv/challenge.htm> (last visited Feb. 27, 2003).

⁵ See Mowery et al., *supra* note 1, at 77; David C. Mowery, *Collaborative Ventures Between U.S. and Foreign Manufacturing Firms: An Overview*, in *INTERNATIONAL COLLABORATIVE VENTURES IN U.S. MANUFACTURING* 1-22 (David C. Mowery ed., 1988). These alliances are also a primary vehicle for financing R&D by nascent firms. For example, Lerner and Tsai find that R&D spending in biotechnology alliances alone was almost equal to venture capital disbursements across all industries (\$3.5 billion versus \$3.7 billion). JOSH LERNER & ALEXANDER TSAI, *DO EQUITY FINANCING CYCLES MATTER? EVIDENCE FROM BIOTECHNOLOGY ALLIANCES* (Nat'l Bureau of Econ. Research, Working Paper No. 7464, 2000).

⁶ See Ranjay Gulati & Harbir Singh, *The Architecture of Cooperation: Managing Coordination Costs and Appropriation Concerns in Strategic Alliances*, 43 *ADMIN. SCI. Q.* 781 (1998) (providing a review of this literature).

choice of structure matter for performance? Here, I examine alliance structure in detail, examining how such structure is chosen, with guidance from the organizational economics literature, and the implications of such choice for the ultimate outcome of the alliance. Several recent empirical studies on alliance structure have improved our understanding of structure in alliances, highlighting key structural alternatives and properties, as well as how structure is chosen. While this discussion is informative, we are still left with the question – does alliance structure really matter when it comes to performance? Thus, I consider whether this choice has real implications for alliance outcomes with evidence from R&D alliances. By discussing and synthesizing several recent findings, a clearer picture of the role and importance of alliance structure emerges.

I. THE COOPERATION PROBLEM IN ALLIANCES

Notwithstanding the potential benefits from alliances, substantial barriers to successful collaboration exist. Firms face considerable moral hazard problems since partner behavior is often unobservable and the costs of opportunism are potentially high. Allying firms cannot be sure that their partners are contributing equitably to alliance activities. Partner firms may, for example, contribute fewer or lesser quality inputs to alliance activities than originally agreed. This is particularly so where firms undertake complex activities, such as high technology manufacturing, or activities with uncertain outcomes, such as joint R&D. In such cases, firms cannot easily infer partner contributions by examining results since the link between effort and results is highly variable. Given shared outcomes, the link between what a firm contributes and its payoffs is diluted and, consequently, the firm's incentive to contribute valuable resources is dampened. Thus, for example, firms collaborating in R&D may not assign personnel knowledgeable about the relevant technologies or may provide less experienced research scientists to reduce their direct cost. In this way, firms may attempt to free ride off the efforts of their partners.

Similarly, firms are naturally concerned about making partners into (more) formidable competitors. A firm's most valuable assets are those that distinguish the firm from its competitors. These assets are typically embodied in a firm's intellectual property, whether in the form of new technology or product specifications, manufacturing process techniques, or information on key markets and the competitive strategy of the firm. By simply co-locating key personnel or allowing site visits by a partner, a firm

may inadvertently transfer some of these key assets. Firms may also deliberately take partner assets; partners may seek to learn as much as possible from their partners while simultaneously reducing access of other partner firms to their own technologies and assets.⁷ Given the imperfect nature of intellectual property rights protection, a firm cannot rely on the courts to keep others from appropriating rents from its intellectual property.⁸ Where these risks are severe, firms may limit contributions of resources to alliance activities to protect against such opportunism. While these steps may not be inconsistent with the alliance agreement in a strict sense, such actions taken to guard against opportunism may lower the ultimate performance of the alliance.

In addition to addressing concerns of opportunistic behavior by partners, firms must also find ways to effectively communicate and coordinate activities. Differences in organizational and national cultures and/or managerial styles may lead to implementation issues not unlike those faced in mergers. Firms not only have to make decisions and coordinate actions within their own organizational boundaries, but must also negotiate and agree on how to implement often complex tasks across organizations. Bureaucracy and political processes often slow decision-making within firms; these difficulties are compounded in decision-making between firms since partners often have very different ways of approaching tasks. These differences, along with competing interests and the fact that partners often place different values on the alliance activities, mean that each may have different levels of commitment to the alliance. Misunderstandings and costly missteps may arise as a consequence.

Via appropriately selected and crafted alliance structure, however, firms can alleviate concerns over opportunism, clearly set out expectations, and improve communication over the course of the alliance. By appropriate alignment of incentives and formal constraints on behavior (such as explicitly stating required contributions), firms can reduce concerns over free riding and leakage of intellectual property. Thoughtful planning through structure, even

⁷ Hamel et al., *Collaborate with Your Competitors - and Win*, HARV. BUS. REV., Jan.-Feb. 1989, at 133-39 (finding that firms in cross-border alliances often pursue this strategy, seeking to learn as much from their partner while minimizing access to their own assets).

⁸ Formal protections for intellectual property, such as patents, copyrights, and trademarks, do not perfectly protect a firm's intellectual assets. See WESLEY M. COHEN ET AL., PROTECTING THEIR INTELLECTUAL ASSETS: APPROPRIABILITY CONDITIONS AND WHY U.S. MANUFACTURING FIRMS PATENT (OR NOT) (Nat'l Bureau of Econ. Research, Working Paper No. 7552, 2000), available at <http://papers.nber.org/papers/w7552> (detailing a recent study on firms' use of patents to protect their knowledge based assets and a review of literature in this area).

if not all aspects are legally enforceable, may reduce the potential for misunderstandings and uncoordinated responses to unanticipated contingencies that arise over the course of the alliance.

II. ALLIANCE STRUCTURES AND CHOICE

A. *Exploring Alliance Structure: A Discussion of Contracts and Equity Joint Ventures*

Firms have a myriad of forms to choose from in organizing their alliance activities, ranging from simple licensing arrangements to more complex forms, such as the equity joint venture, where firms incorporate a separate entity for their collaborative efforts.⁹ These forms can be loosely grouped into two categories: purely contractual and institutional (i.e., the equity joint venture). While all alliances involve some form of written contract, purely contractual forms do not involve a separate legal entity for alliance activities (c.f., the equity joint venture). In institutional forms, or equity joint ventures, firms create a new entity that is jointly owned and operated by two or more allying firms.¹⁰ While there is substantial heterogeneity within each of these forms – for example, in terms of how firms align incentives and provide for dispute resolution – discrete differences between the forms exist. These distinctions ultimately determine how firms choose between the two forms for their alliance activities.

Conceptually, both contractual forms and equity joint ventures lie on the organizational continuum between market and hierarchy, and as “hybrids” they embody governance characteristics that lie somewhere between these two extremes.¹¹ The differences between the two structures are best highlighted in terms of features unique to the equity joint venture. Relative to the purely contractual form, the equity joint venture more closely resembles hierar-

⁹ For a more thorough discussion of the different forms alliance organization may take, see Farok J. Contractor & Peter Lorange, *Why Should Firms Cooperate? The Strategy and Economic Basis for Cooperative Ventures*, in COOPERATIVE STRATEGIES IN INTERNATIONAL BUSINESS 3-28 (1988); WALTER W. POWELL, RESEARCH IN ORGANIZATIONAL BEHAVIOR 295-336 (Barry M. Staw & L.L. Cummings eds., vol. 12 1990).

¹⁰ Gary P. Pisano et al., *Joint Ventures and Collaborative Arrangements in the Telecommunications Equipment Industry*, in INTERNATIONAL COLLABORATIVE VENTURES IN U.S. MANUFACTURING 23, 32 (David C. Mowery ed., 1988); Joanne E. Oxley, *Appropriability Hazards and Governance in Strategic Alliances: A Transaction Cost Approach*, 13 J.L. ECON. & ORG. 387, 390 (1997).

¹¹ Oxley, *supra* note 10, at 389-92. See generally Oliver E. Williamson, *Comparative Economic Organization: The Analysis of Discrete Structural Alternatives*, 36 ADMIN. SCI. Q. 269-96 (1991).

chy and has some unique attributes that influence how firms adapt to unforeseen contingencies.¹²

All equity joint ventures have a joint board of directors, which is composed of members from all partner firms.¹³ Via this joint board of directors, firms can better communicate as well as veto strategic decisions regarding alliance activities.¹⁴ In addition to this joint governance at the strategic level, joint ventures are characterized by operational management that, at least on a day-to-day basis, is independent of the partner firms. Such independent management allows “self determination” by the joint venture, relative to purely contractual alliance structure, such that the resources contributed to the venture effectively become exclusive resources of the alliance and are managed to ensure optimal effort from those resources. Independent management is a common feature in joint venture contracts. For example, in the joint venture agreement between Parlex Corporation and Shanghai Radio Factory, formed to develop, manufacture, and market flexible printed circuits, the partners stipulate that a general manager is to be appointed to and compensated by the joint venture and, perhaps more importantly, that the general manager is responsible for the day-to-day management of the alliance.¹⁵

Joint ventures also function as repositories for resources contributed by partner firms. The joint venture, as a separate legal entity, allows firms to effectively contribute resources to a third firm, which then manages these resources somewhat independently

¹² Several alliance agreement examples are used in this discussion. All examples were taken from alliance contracts filed with the SEC under the requirement to file “material contracts.”

¹³ J. PETER KILLING, STRATEGIES FOR JOINT VENTURE SUCCESS (1983).

¹⁴ *Id.* For example, the following provision is made in a joint venture agreement between SICPA Industries and Flex Products:

2.2 DESIGNATION OF PROJECTS. Specific tasks to be undertaken by SICPA Industries and Flex shall be determined by the unanimous vote of the committee. Neither SICPA Industries . . . nor Flex . . . shall have any obligation to perform tasks or projects except as authorized and directed by a unanimous vote of the Committee.

In this case, the “Committee” is the joint venture governing body consisting of equal numbers of members from Flex Products and SICPA Industries. Both firms have the explicit right of veto over any activities of the joint venture. Joint Venture Agreement, *available at* <http://cori.missouri.edu>.

¹⁵ Clause 12.3 provides: “The functions and responsibilities of the General Manager shall be . . . to organize and lead the daily management and operation of the Joint Venture Company and to establish the sales strategy and pricing of products sold by the Joint Venture Company” This responsibility is extended beyond day to day responsibilities to major problem solving and execution of contracts on behalf of the joint venture: “The major issues of the Joint Venture Company shall be decided through consultations among the General Manager and Deputy General Manager The General Manager . . . shall have the authority to execute contracts and other instruments on behalf of the Joint Venture Company.” Joint Venture Agreement, *available at* <http://www.sec.gov/archives/edgar/data/724988/0000910647-95-000076.txt>.

of the parent firms. While most alliance agreements specify the contributions required of each partner firm in some detail, only contributions to alliances structured as joint ventures may become the legal property of the alliance itself until dissolution. The most common form of these contributions is cash. For example, in the joint venture between eNote.com Inc. and Seafont Pty. Ltd. to develop and launch a TV email service in Australia and New Zealand, cash contributions to the joint venture may only be used for the purposes of the alliance.¹⁶ Technology licenses are another common contribution to the joint venture's asset stocks. In the joint venture between Semiconductor Laser International Corporation and Orthogenesis Systems, Inc., formed for the purposes of development, production, and sale of medical laser system products, each partner grants an exclusive license over relevant technologies to the joint venture.¹⁷ Contributions may also be in kind. For example, in the joint venture between MEMC Electronics and Khazanah Nasional Berhad for the joint production of silicon wafers, MEMC is required to contribute specific technical assistance to the joint venture, including a "reproducible set of full-size engineering drawings."¹⁸ Interestingly, these contributions sometimes extend beyond physical or capital based assets to employees. For example, in the joint venture agreement between Read Rite Corporation and Sumitomo Metal Industries to develop, manufacture, and market thin-film heads for disk drive manufacturers, employees contributing to the joint venture become employees of the joint venture, rather than the parent company.¹⁹ Further, recall of such

¹⁶ Clause 4.1 provides: "Capital Contributions. On the closing date, each Party shall contribute Two Hundred Fifty Thousand Dollars (\$250,000) in immediately available funds to the account of [the joint venture] The contributed capital shall be used only for the payment of approved expenditures contained in the [joint venture] Business Plan." Joint Venture Agreement, available at <http://www.sec.gov/archives/edgar/data/58636/0000912057-00-020383-index.html>.

¹⁷ Clause 5(a) provides: "SLI hereby grants to the Joint Venture an exclusive license of the Patent Rights and Know-How of SLI insofar as they relate to the manufacture of the Orthogenesis System to make, use and sell the Systems worldwide in the field of medical laser system products for the uses described on Schedule I. The term of such license shall be coterminous with the Term of the Joint Venture." A similar provision exists granting exclusive rights of relevant Orthogenesis patents and know-how to the venture. Joint Venture Agreement, available at www.sec.gov/sarchives/edgar/data/921445/0000921445-99-000028-index.html.

¹⁸ Clause 2.2 provides: "[MEMC Electronic's] technical assistance . . . shall include the delivery to the [joint venture] of a technical design package written in English in terms of standard engineering practices and shall include 1 (One) reproducible set of full-sized engineering drawings." MEMC ELECTRONIC MATERIALS, INC., 1996 ANNUAL REPORT EXHIBIT 10-iii (1996), available at <http://www.sec.gov/archives/edgar/data/945436/0000950124-97-001680.txt>.

¹⁹ Clause 10.2 provides: "Employees. The parties agree that after the incorporation of the [joint venture], the day to day operation of the [joint venture], . . . shall be carried out mainly by

employees back to the parent company is explicitly limited.²⁰ Along these lines, each partner firm also has limited powers of fiat over employees of the alliance in an equity joint venture. Even where joint venture personnel are drawn from the parent firms, these personnel often become employees of the venture rather than of the parent firms.²¹ Since all of the firms involved have a managerial presence in the venture via the joint board, each partner has some control over the promotion or demotion of workers that are over- or under-performing, as well as some influence over the allocation of workers to specific tasks.²² As Killing notes:

Communication between the venture and the parent company is likely to be improved, simply because employees of the two firms will know each other. More complete information offers the prospect of more complete control. Secondly, such an employee is likely to act in ways which his parent would find acceptable, even when his actions are not overtly being controlled.²³

A final attribute of the joint venture worth noting is the ability to implement a capital reinvestment or dividend policy. A capitalization or dividend policy may function as a punishment mechanism to deter non-cooperative behavior in the alliance such as the under provision of quality and/or effort. Several examples of such policies exist in the joint venture agreements; these policies usually take the form of not distributing venture profits during a financial period. For example, the joint venture agreement between Diodes Incorporated and Shanghai Kai Hong Electronics Company (for the manufacture and sale of diodes and associated electronic components) states that the joint venture board may temporarily suspend profit distributions in consideration of the joint venture's long-term growth.²⁴ While it is conceivable that allying firms

employees dispatched by [Sumitomo] who shall become employees of the [joint venture] as soon after their dispatch to the [joint venture] as is practicable." On file with author.

²⁰ Clause 10.2, continues: "[Sumitomo] will not recall a dispatched employee without the consent of the President of the [joint venture] and the employee involved." On file with author.

²¹ See, e.g., KILLING, *supra* note 13, at 24-29 (finding that in study of Mexican joint ventures, eight out of ten general managers were on the payroll of the joint venture, rather than the parent. In only four out of ten ventures was the general manager's bonus tied to one parent's results. Less senior employees are even less likely to be officially tied to a specific parent).

²² Of course, to the extent that employees rotate back to parent firms, incentives to act in the best interests of the joint venture rather than the parent may be curtailed. Such incentives may be further attenuated, if employees seek to gain employment with the other partner firm. Joint venture agreement terms, however, often preclude a firm from hiring its partner's employees that are working for the venture.

²³ KILLING, *supra* note 13, at 26-27.

²⁴ "The [joint venture] shall distribute its profit once every year. . . . In consideration of the [joint venture's] long term growth, the Board of Directors may pass a resolution to tempo-

could specify such a policy in a purely contractual alliance, the ability of each firm to enforce a penalty is more limited. The fact that the joint venture can legally own assets and determine the distribution of alliance profits back to the alliance partners (in a way that is externally enforceable) gives the joint venture an advantage over purely contractual alliance structure in credibly implementing such a policy.

These characteristics suggest that the equity joint ventures permit firms to adapt to unforeseen contingencies that arise over the course of the alliance in a more coordinated fashion, relative to more contractual alliance structures. Such enhanced coordination and control, however, comes at a cost. The costs of administrative mechanisms in the equity joint venture (such as the board of directors) as well as the set up and negotiation expenses far exceed those of more contractual structures on average.²⁵ Further, the mechanisms that facilitate greater coordination and control in an alliance also introduce bureaucratic costs. For example, while joint decision-making provided by the joint board of directors may allow greater coordination between alliance partners, this coordination adds inefficiencies to the decision-making process. Given these costs, firms should use equity joint ventures only where alliance activities require more substantial coordination and control. As discussed below, this is more likely the case when firms cannot adequately specify, monitor, and enforce partner rights and obligations via contract.²⁶

While it is useful to examine what makes joint ventures unique from purely contractual forms of organization, focusing on these distinctions masks the many and varied mechanisms that firms may use to create cooperative environments in all types of alliances, whether contractual or institutional (equity joint ven-

rarily suspend the profit distribution." Joint Venture Agreement Between Mrs. J.H. Xing and Diodes Incorporated cl. 27 (Mar. 18, 1996) (on file with SEC, filed Ex. 10.17 with Annual Report, Form 10-K for fiscal year ended Dec. 31, 1995 (Apr. 1, 1996)), available at <http://www.sec.gov/archives/edgar/data/29002/0000950150-96-000215.txt>.

²⁵ Pisano et al., *supra* note 10, at 32.

²⁶ Consistent with the additional costs associated with the equity joint venture as well as the recognition that not all alliances warrant establishment of an ongoing concern, equity joint ventures appear slightly less common than purely contractual forms of alliance governance. For example, in 1996, the Securities Data Corporation Database on Alliances and Joint Ventures reported that 919 alliances were announced by firms in the telecommunications equipment and microelectronics industries. Of these 919 alliances, 378 (or 41%) were structured as equity joint ventures. Manufacturing was the most common activity for the joint ventures established (44%), perhaps because joint ventures can carry assets over multiple time periods independent of the partner firms.

tures). Researchers in the property rights literature²⁷ focus on the allocation of control rights, or the residual ownership rights conferred by a contract. Via control rights over key assets or outcomes of the alliance, firms have a tool to induce efficient investments by firms, even where these investments are not perfectly observable.

In addition to allocating control rights, firms can also provide greater detail on the rights and obligations of the partners in the alliance agreement. With greater detail on the rights and obligations of the partners, firms provide documentation that may be used as a reference to reduce misunderstandings. For example, firms may detail the contributions required by the firms in terms of specific technologies, spell out the phases of the alliance activity,²⁸ and even specify managers for the joint development.²⁹ Increased detail in an alliance agreement may provide greater guidance to the courts and, consequently, more efficient outcomes should external enforcement be required. The presumption is that the threat of legal enforcement will curtail opportunistic behavior since courts can more easily direct specific performance or appropriate damages when the terms of the collaboration are set out in greater detail.³⁰ However, there are reasons to believe that the detail in an alliance agreement serves to do more than simply provide guidance to the courts in an event of a legal dispute. Firms frequently in-

²⁷ See e.g., S.J. Grossman & O.D. Hart, *The Costs and Benefits of Vertical Ownership: A Theory of Vertical and Lateral Integration*, 94 J. POL. ECON. 691(1986); J. Lerner & R.P. Merges, *The Control of Technology Alliances: An Empirical Analysis of the Biotechnology Industry*, 46 J. INDUS. ECON. 125 (1988).

²⁸ See, e.g., RAMTRON INT'L CORP., QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15D OF THE SECURITIES EXCHANGE ACT OF 1934, file no. 0-17739 (May 15, 1997), available at <http://www.sec.gov/archives/edgar/data/849502/0000849502-97-000016.txt> (providing multiple examples of these specific contributions and process steps in the joint development agreement between Ramtron and ULVAC, an alliance formed for the development of thin process films used in FRAM (computer memory)). Two example illustrations are set out below.

Clause 2.2: "Phase 2: The SPZ-1000 machine will be transferred to Ramtron, Colorado Springs at the beginning of Phase 2. The work undertaken will include composition, microstructural, electrical and other optimizations. Specific Phase 2 objectives will be defined by the parties through mutual consultations. A minimum of 50 wafers per month will be supplied by Ramtron for the development. Machine time for joint development work will be shared with customer evaluations, at ULVAC's cost and Ramtron prototype production. ULVAC will provide in-house support during Phase 2 to the extent agreed by the parties"

Clause 4.1: "Necessary number of stack and/or individual layer films will be patterned photolithographically at Ramtron for etch development work at ULVAC."

²⁹ See *id.* The contract between Ramtron and ULVAC, provides in Clause 2 that, "The parties hereby agree that the Project Leader for Ramtron shall be Mr. Tom Davenport and the Project Leader for ULVAC shall be Mr. Yoshifumi Ota." *Id.*

³⁰ See Keith J. Crocker & Scott E. Masten, *Pretia Ex Machina? Prices and Process in Long Term Contracts*, 34 J.L. & ECON. 69, 71 (1991) ("[T]he presumption is clear that courts will either direct specific performance or apply appropriately measured damages to assure that the intentions of the parties fulfilled.").

clude terms that are not legally enforceable (at least in terms of directing specific performance), such as the specification of particular individuals for management roles in the alliance. Further, firms frequently waive their rights to court adjudication in their alliance agreements.³¹ Given this explicit removal of court adjudication as a motive for more detailed contracts, this suggests that more detailed contracts provide guidance to the firms (rather than the courts) and may be an important tool for planning collaborative activities. Thus, the role of alliance structure likely goes beyond being a legal tool to protect partner assets and provide guidance to the courts, to being a means to plan collaborative activities and agree in advance on the key parameters of cooperation.

B. Choice of Alliance Structure

How firms choose among these varied alliance structures is the subject of much work in the organizational economics literature. Researchers in organizational economics argue that the governance mechanisms we observe reflect a rational attempt to induce either efficient ex ante investments (i.e., property rights theory³²) or to reduce ex post bargaining and hold up threats (i.e., transaction cost economics³³). Generally, these studies have focused on the choice of formal organization to control either ex ante or ex post contracting costs. While some recent research has examined the allocation of control rights according to property rights

³¹ See, e.g., Ross Tech., Inc., Annual Report, Development Agreement, SEC Form 10-K Exhibit 10.43 (1997), available at <http://www.sec.gov> ("Each party waives any rights to bring any such dispute, controversy or claim in any other forum or proceeding, including without limitation, the International Trade Commission of the United States or any other administrative or judicial forum.").

³² See Sanford J. Grossman & Oliver D. Hart, *The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration*, 94 J. POL. ECON. 691 (1986). That is, property rights theory ('PRT') as developed initially by Grossman and Hart. Under PRT, contracts are necessarily incomplete – required investments are not fully contractible. Thus, organizational form is determined by an allocation of ownership and, consequently, control rights that will induce an efficient level of investment by parties to the contract. *Id.* at 695-97. See generally OLIVER HART, FIRMS, CONTRACTS, AND FINANCIAL STRUCTURE (1995) (providing a thorough review of this literature).

³³ Using a transaction cost economics approach, governance or contract structure is chosen on the basis of ex post quasi rents, which are driven by the combination of incomplete contracts and relationship specific assets. Generally, the more specialized are relationship assets (such that partners face sharply reduced values for those assets outside the relationship), the larger the quasi rents and the higher the likelihood of integration. See, e.g., OLIVER E. WILLIAMSON, MARKETS AND HIERARCHIES: ANALYSIS AND ANTITRUST IMPLICATIONS (1975); Paul L. Joskow, *Asset Specificity and the Structure of Vertical Relationships: Empirical Evidence*, 4 J.L. ECON. & ORG. 95 (1988); Scott E. Masten, *The Organization of Production: Evidence from the Aerospace Industry*, 27 J.L. ECON. 403 (1984).

logic in the context of alliances,³⁴ the bulk of the empirical work on alliance structural choice has been in the transaction cost economics literature.

The transaction cost economics literature, with its focus on discrete modes of organization, as suggested by Oliver Williamson,³⁵ largely examines the choice between equity joint ventures and more contractual modes of organization, rather than the choice of alliance terms per se.³⁶ For example, Oxley examines the choice of equity joint venture over more contractual modes of organization as a function of transaction characteristics.³⁷ Generally, this literature suggests that firms are more likely to select an equity joint venture when alliance activities are more complex and involve greater uncertainty. More uncertain or complex activities make it difficult for firms to specify rights and obligations in a contract and enforce compliance.

Several empirical studies support these transaction cost arguments. For example, Sampson finds that allying firms are more likely to choose equity joint ventures when the size of the alliance increases (in terms of the number of partners) and when joint activities are more complex, involving multiple tasks such as manufacturing and marketing in addition to joint R&D.³⁸ This finding is consistent with work by Pisano and Oxley,³⁹ where alliances involving more than one type of activity were found to be more likely to use equity links than were alliances involving only one activity. Oxley also finds that increasing the number of partners may exacerbate monitoring difficulties and induce a choice of more hierarchical governance.⁴⁰

³⁴ Work in the property rights literature focuses primarily on the allocation of equity and control rights. For example, Lerner and Merges find that residual control rights in biotechnology alliances are allocated as a function of the financial resources and technology endowment of a partner. See Lerner & Merges, *supra* note 27. Work by Robinson and Stuart yields similar results. See David T. Robinson & Toby E. Stuart, *Financial Contracting in Biotech Strategic Alliances* (Feb. 17, 2002) (unpublished manuscript submitted to NBER Strategic Alliance Conference, available at <http://www.nber.org/books/stragalli/robinson.pdf>).

³⁵ See Williamson, *supra* note 11, at 269.

³⁶ See Oxley *supra* note 10, at 387-409; Joanne E. Oxley, *Institutional Environment and the Mechanisms of Governance: The Impact of Intellectual Property Protection on the Structure of Inter-firm Alliances*, 38 J. ECON. BEHAVIOR & ORG. 283, 283-309 (1999); Gary P. Pisano, *Using Equity Participation to Support Exchange: Evidence from Biotechnology Industry*, 5 J.L. ECON. & ORG. 109, 109-26 (1989); Rachelle C. Sampson, *The Cost of Misaligned Governance in R&D Alliances*, J.L. ECON. & ORG. (forthcoming 2003); Rachelle C. Sampson, *Organizational Choice and R&D Alliances: Knowledge Based and Transaction Cost Perspectives*, MANAGERIAL AND DECISION ECONOMICS (forthcoming 2003).

³⁷ Oxley, *supra* note 10, at 390.

³⁸ Sampson, *The Cost of Misaligned Governance in R&D Alliances*, *supra* note 36.

³⁹ Pisano, *supra* note 36, at 122; Oxley, *supra* note 10, at 402.

⁴⁰ Oxley, *supra* note 36, at 406.

The prevailing institutional regime also affects the choice of alliance structure. In international alliances, for example, stronger intellectual property rights reduce the need for the equity joint venture.⁴¹ Similarly, equity joint ventures are less likely chosen when partners are headquartered in nations with strong rule of law and efficient judicial systems.⁴² These results suggest that the external institutional framework may improve the efficiency of purely contractual alliance organizational forms, relative to equity joint ventures. Firms may be able to better rely on external enforcement of intellectual property rights (for example) when ally-ing across countries with strong property rights protections. Overall, the transaction cost analysis of alliance structural choice suggests that equity joint ventures are more likely chosen when alliance activities are difficult to contract for (in terms of specification, monitoring, and enforcement). When alliance activities are difficult to contract for, costly haggling and renegotiation is more likely during the course of the alliance. An equity joint venture provides the incentives and the ability to adjust to unforeseen contingencies in a more coordinated fashion when compared to purely contractual forms of alliance organization.

III. THE ROLE OF RELATIONSHIPS IN CHOICE OF STRUCTURE

Formal alliance structure is, of course, not the only solution to the moral hazard problem inherent in alliances. Discipline mechanisms outside the contract itself can encourage cooperative behavior between partners. More specifically, repeated interactions can, through implicit mechanisms, serve to mitigate moral hazard.⁴³ Both theoretical and empirical studies have shown that such repeated interactions can act as a discipline mechanism that supports cooperative behavior among competitors. For example, Green and Porter demonstrate that a cartel among competitors is sustainable when firms repeatedly interact.⁴⁴ Similarly, Bernheim and Whinston show that, under certain market conditions, multimarket contact can sustain cooperation between competing firms.⁴⁵ The

⁴¹ See *id.* at 395; see also Sampson, *The Cost of Misaligned Governance in R&D Alliances*, *supra* note 36.

⁴² See Oxley, *supra* note 36, at 406; Sampson, *The Cost of Misaligned Governance in R&D Alliances*, *supra* note 36.

⁴³ See Jean-Pierre Benoit & Vijay Krishna, *Renegotiation in Finitely Repeated Games*, *ECONOMETRICA* 303, 318 (1993) (surveying the theoretical foundations).

⁴⁴ Edward J. Green & Robert H. Porter, *Noncooperative Collusion Under Imperfect Price Information*, 52 *ECONOMETRICA* 87, 93 (1984).

⁴⁵ B. Douglas Bernheim & Michael D. Whinston, *Multimarket Contact and Collusive Behavior*, 21 *RAND J. ECON.* 1, 2 (1990) (examining “the effect of multimarket contact on the degree of cooperation that firms can sustain in the settings of repeated competition”).

foundations of these arguments are comparable to those made by Robert Axelrod: a “tit for tat” strategy in a repeated game setting can support long-term cooperation. Analogously, repeated contact among allying firms can provide a discipline mechanism that supports cooperation.⁴⁶ In this sense, alliances are often not independent transactions – each alliance is embedded in a firm’s network of past alliances and relationships with other firms.

Repeated interactions in the marketplace rather than with a specific firm may lead to development of reputation, which may also support economic exchange through less formal means. Kreps argues that good reputations may prevent firms from behaving opportunistically if the firm believes that its good reputation influences future trading opportunities: “[T]he reputation of a trusted party can be a powerful tool for avoiding the transaction costs of specifying and enforcing the terms of the transaction The trusted party will honor that trust because to abuse it would preclude or substantially limit opportunities to further engage in future valuable transactions.”⁴⁷ Naturally, firms must perceive the value of these future business opportunities to exceed the value of short-term non-cooperative behavior. Klein and Leffler lend empirical support to these arguments (through simulation), finding that the threat of lost reputation is a means to enforce promises on quality, which are otherwise unenforceable.⁴⁸

Economists, of course, are not the only ones touting the impact of repeated interactions on cooperation. Macaulay argued that firms rarely rely on legal sanctions to uphold terms of economic exchange and that reputation or social norms may serve to ensure cooperative behavior.⁴⁹ Telser similarly argues that agreements can be self-enforcing, even if not complete, when the parties value the future relationship sufficiently.⁵⁰ Granovetter states the underlying arguments for the link between relationships and cooperative behavior: “[I]ndividuals with whom one has a continuing relation have an economic motivation to be trustworthy, so as not to discourage future transactions; and . . . departing from pure eco-

⁴⁶ ROBERT M. AXELROD, *THE EVOLUTION OF COOPERATION* (1984).

⁴⁷ David M. Kreps, *Corporate Culture and Economic Theory*, in *PERSPECTIVE ON POSITIVE POLITICAL ECONOMY* 90, 116 (James E. Alt & Kenneth A. Shepsle eds., 1990).

⁴⁸ Benjamin Klein & Keith B. Leffler, *The Role of Market Forces in Assuring Contractual Performance*, 89 J. POL. ECON. 615, 633-37 (1981).

⁴⁹ Stewart Macaulay, *Non-Contractual Relations in Business: A Preliminary Study*, 28 AM. SOC. REV. 55, 63 (1963) (stating that the most obvious non-legal sanction is the “concern[] with both the reaction of the other party and with his own business reputation”).

⁵⁰ L.G. Telser, *A Theory of Self-Enforcing Agreements*, 53 J. BUS. 27, 28-30 (1980) (analyzing the “Prisoner’s Dilemma” in relation to economic transactions and arguing that contracts are only self-enforcing so long as the parties cannot predict which transaction is the last one).

conomic motives, continuing economic relations often become overlaid with social content that carries strong expectations of trust and abstention from opportunism.”⁵¹

Empirical evidence provides some support for this link. Gulati finds that partners choose equity based alliance organization (including equity joint ventures) less frequently when the firms have interacted previously.⁵² Similarly, Gulati and Singh find that firms with prior ties are less likely to choose more hierarchical controls for their alliance activities and suggest that trust developed over these prior ties may alleviate concerns of opportunism.⁵³ These arguments are consistent with the more qualitative work of Larson, who concludes that “[t]he relative unimportance of formal contractual aspects of exchange and, in contrast, the significance of trust and reciprocity norms appear to reflect the reality of economic exchange.”⁵⁴

While the impact of relationships on the choice between discrete alliance structures has been examined, the effect of such relational governance on the degree of detail in alliance agreements has only recently been explored. Given the costs of drafting more detailed or complete contracts⁵⁵ and setting up equity joint ventures, the impact of prior alliances on alliance structure appears straightforward. Where alternative discipline mechanisms exist, contracts are likely less detailed. However, recent evidence from Ryall and Sampson suggests the opposite in the context of R&D alliances in the telecommunications and microelectronics industries; prior relationships between firms lead to more detailed or customized contracts.⁵⁶ Consistent with prior work on contracting in outsourcing relationships,⁵⁷ this finding suggests that prior rela-

⁵¹ Mark Granovetter, *Economic Action and Social Structure: The Problem of Embeddedness*, 91 AM. J. SOC. 481, 490 (1985).

⁵² Ranjay Gulati, *Does Familiarity Breed Trust? The Implications of Repeated Ties for Contractual Choice in Alliances*, 38 ACAD. MGMT. J. 85, 102 (1995) (“[T]he larger the number of prior alliances between partners, the less likely their current alliance is to be equity based, even when the presence of an R & D component is controlled for”).

⁵³ See Ranjay Gulati & Harbir Singh, *The Architecture of Cooperation: Managing Coordination Costs and Appropriation Concerns in Strategic Alliances*, 43 ADMIN. SCI. Q. 781-814 (1998).

⁵⁴ Andrea Larson, *Network Dyads in Entrepreneurial Settings: A Study of the Governance of Exchange Relationships*, 37 ADMIN. SCI. Q. 76, 98 (1992).

⁵⁵ See, e.g., Keith J. Crocker & Kenneth J. Reynolds, *The Efficiency of Incomplete Contracts: An Empirical Analysis of Air Force Engine Procurement*, 24 RAND J. ECON. 126-46 (1993).

⁵⁶ M.D. RYALL & R.C. SAMPSON, DO PRIOR ALLIANCES INFLUENCE CONTRACT STRUCTURE? EVIDENCE FROM TECHNOLOGY ALLIANCE CONTRACTS (New York University Working Paper, 2003).

⁵⁷ See generally Laura Poppo & Todd Zenger, *Do Formal Contracts and Relational Governance Function as Substitutes or Complements?*, 23 STRATEGIC MGMT. J. 707 (2002) (dis-

tionships allow parties to learn more about each other and draft more detailed and, perhaps, better contracts. Thus, while choice of alliance structure often reflects the proposed activities and coordination tasks presented by the alliance, such structure also may reflect the relationships between the allying parties.

IV IMPLICATIONS OF STRUCTURAL CHOICE

The implicit assumption in most of the organizational economics literature is that choice of organizational structure consistent with theory (whether transaction cost economics or property rights theory) leads to more efficient outcomes. According to transaction cost logic, a discriminating alignment of transactions with governance leads to more efficient outcomes via a reduction of transaction costs.⁵⁸ While empirical evidence in this vein shows strong support for the premise that firms choose alliance organization consistently with transaction cost predictions,⁵⁹ there is less evidence of the performance implications of governance selected (or not selected) according to transaction cost predictions. Empirical support for the impact of structure on performance is necessary to answer the question posed by Masten: “[A]re the phenomena that constitute the object of our speculations important?”⁶⁰ Until recently, we have lacked evidence on what firms gain from choosing the best versus the next best organizational alternative in the context of alliances.

In a recent empirical study, Sampson shows that firms selecting alliance organization or structure according to transaction cost arguments improves collaborative benefits substantially.⁶¹ Why might “misaligned” alliance structure (that is, choice inconsistent with transaction cost logic) affect alliance performance? So what if firms don’t choose alliance organization according to theory? In the context of R&D alliances, two scenarios are possible. First, if firms do not structure alliances to adequately protect against opportunistic behavior by their partners and facilitate coordinated responses to unforeseen contingencies, firms may take alternative steps to minimize their exposure to potential non-cooperative be-

cussing how formal contracts and relational governance complement each other rather than work against each other).

⁵⁸ OLIVER E. WILLIAMSON, *THE ECONOMIC INSTITUTIONS OF CAPITALISM* 20-29 (1985).

⁵⁹ See Oxley, *supra* note 10, at 396-407 (empirical analysis based on data from the Cooperative Agreements and Technology Indications data); Pisano, *supra* note 36, at 117-24 (analyzing 195 collaborative arrangements within the biotechnology industry); Sampson, *Organizational Choice and R&D Alliances: Knowledge Based and Transaction Cost Perspectives*, *supra* note 36.

⁶⁰ Scott E. Masten, *Modern Evidence on the Firm*, *AMER. ECON. REV.*, May 2002, at 428.

⁶¹ See Sampson, *The Cost of Misaligned Governance in R&D Alliances*, *supra* note 36.

havior. For example, firms may reduce the quality and extent of resources contributed from what was originally intended. Alternatively, if firms choose an equity joint venture to facilitate coordinated responses and control non-cooperative behavior when alliance activities can be adequately structured via a purely contractual form of organization, firms incur unnecessary bureaucratic and set up costs without the compensating benefits. That is, in the latter case, the inefficiencies presented by equity joint venture structure outweigh the gains from enhanced coordination. In either case, misaligned choice likely stifles the benefits from collaboration, exacerbating moral hazard problems or slowing and politicizing decision-making such that responsiveness is dampened or sub-optimal decisions are made with respect to alliance activities.

To test this general hypothesis, Sampson groups alliances according to contracting difficulties.⁶² According to transaction cost logic, those alliances with greater contracting difficulties should choose an equity joint venture for alliance structure. Conversely, those alliances that have low contracting difficulties can be structured by purely contractual forms without the need for the added costs of the equity joint venture. Using a common empirical technique to estimate outcomes of choices not made,⁶³ Sampson then compares alliance outcomes under the structure chosen with the structure not chosen.⁶⁴ Empirical evidence from this estimation shows that misaligned alliance structure – that is, structure not chosen consistent with transaction cost logic – exacts a toll on collaborative outcomes. Estimates show that firms choosing misaligned structure could improve collaborative outcomes by an average of 138 percent by choosing aligned structure instead. Thus, this result implies that structure does indeed matter for alliance outcomes. Thoughtful consideration of how to organize inter-firm collaboration may help avoid the many pitfalls in coordinating across organizational boundaries.

V. ROLE OF LAWYERS IN ALLIANCES

Since the theme of this symposium is the “role of lawyers in strategic alliances,” it seems appropriate to conclude by reflecting

⁶² *Id.* These difficulties were estimated to be a function of the alliance activities and institutional environment. Fundamentally, though, contracting difficulties rise when alliance activities are more complex or have more uncertain outcomes.

⁶³ See James J. Heckman, *Sample Selection Bias as a Specification Error*, 47 *ECONOMETRICA* 153, 153-55 (1979) (detailing the analysis of sample selection bias).

⁶⁴ Sampson, *The Cost of Misaligned Governance in R&D Alliances*, *supra* note 36.

on the role lawyers play in drafting alliance agreements and as partners in planning inter-firm collaboration. The role of lawyers in strategic alliances can be seen as analogous to the role of structure in strategic alliances – clearly important, but often overlooked. Despite the recent evidence on the importance of alliance structure, structure is one of the most overlooked aspects of alliance formation.⁶⁵ This oversight is similar to that noted in recent merger waves. As *The Economist* notes: “Too many mergers . . . duck the hardest questions until after the deal has gone through. . . . Companies that agree on a clear strategy and management structure before they tie the knot stand a better chance of living happily ever after.”⁶⁶

Unfortunately, managers often resist careful consideration of formal structure initially, perhaps believing that structure is of secondary importance or that the process of setting out formal rights and obligations in a contract may erode trust between partners.⁶⁷ This resistance to formal planning may, in part, explain the failure of many alliances to live up to partner expectations. Survey based evidence shows that partner firms are not satisfied with the results of their collaborative activities.⁶⁸ Larger scale empirical research suggests that the termination rates in joint ventures are higher than can be explained by the successful attainment of joint goals. Kogut argues: “The significant number of terminations of joint ventures in the early years suggests, however, that many of these terminations are a result of business failure or a fundamental instability in governance.”⁶⁹

Given the propensity of business executives and dealmakers to avoid the more difficult planning processes until the deal has gone through, lawyers are an important counterbalance to the oversight and hubris that may accompany such deals. By forcing articulation of issues critical to alliance success, such as goals, frameworks to deal with unexpected contingencies, and explicit

⁶⁵ JOHN R. HARBISON & PETER PEKAR, JR., *SMART ALLIANCES: A PRACTICAL GUIDE TO REPEATABLE SUCCESS* (1998).

⁶⁶ *How to Make Mergers Work*, *THE ECONOMIST*, Jan. 9, 1999, at 15, 16.

⁶⁷ Research in the behavioral management field has argued that legalistic enforcement of relationships may reduce the level of trust, by imposing a, “psychological and/or an interactional barrier between the two parties that stimulates an escalating spiral of formality and distance.” See Sim B. Sitkin & Nancy L. Roth, *Explaining the Limited Effectiveness of Legalistic ‘Remedies’ for Trust/Distrust*, *ORGANIZATION SCIENCE* 367, 369 (August 1993); see also Granovetter, *supra* note 51, at 481 (discussing behavior and how institutions are affected by social relations); Larson, *supra* note 54, at 76 (examining social control in network organizational forms).

⁶⁸ JOEL BLEEKE & DAVID ERNST, *COLLABORATING TO COMPETE: USING STRATEGIC ALLIANCES AND ACQUISITIONS IN THE GLOBAL MARKETPLACE* (1993).

⁶⁹ Bruce Kogut, *The Stability of Joint Ventures: Reciprocity and Competitive Rivalry*, 38 *J. INDUS. ECON.* 183, 184 (1989).

expectations of each partner, legal counsel can temper any such hubris and faddishness and prevent firms from entering costly projects without consideration of the consequences.

Alliance structure has many dimensions, several of which are discussed in detail above, and can involve considerable complexity, requiring the guidance of an expert practitioner. While much of this structure is concerned with protecting a firm's interests should the alliance activities go awry, structure is more than constraints on behavior. Structure, even if not of the legally enforceable type, helps to reduce misunderstandings and eases collaboration by providing mechanisms for communication and setting clear expectations and plans in advance. In this sense, lawyers can be (and are) more than simply legal technicians – acting as true business partners and advisors in helping to set this structure.

The importance of such structure in alliances cannot be underestimated. Poorly chosen structure quickly becomes apparent, often leading to costly missteps and communication failures, reducing the confidence of firms in their partners and ultimately reducing the probability of success. In contrast, good structure is often unobservable, facilitating value creation and effective collaboration. Appropriate and thoughtful structure, while perhaps thought of as a secondary concern, ultimately is what allows firms to focus on achieving the ultimate goals of the alliance.