III. ALLIANCES

A. ALLIANCE OUTCOMES

Todd Saxton, The Effects of Partner and Relationship Characteristics on Alliance Outcomes, 40 Academy of Management Journal 443 (April 1997)

Study of 98 dyadic alliances (covering eight countries and several different types of alliance) tests hypotheses that the following are positively associated with alliance outcomes: (1) partner reputation—both because reputation may reflect the partner’s management, product or financial quality, and because reputation gives a firm better access to scarce resources; (2) a prior relationship between the partners—because the relationship built trust and better knowledge of the partner’s capability; (3) shared decision making—which suggests close interaction signifying both commitment to outcomes and reduced information asymmetry; and (4) similarity between partners—which makes it easier to identify a partner’s potential contribution, and also to appropriate knowledge from one another.

Results of OLS regression indicate that partner reputation is positively and significantly related to long-term satisfaction with the alliance, though not to initial satisfaction. Author notes that economic theory predicts reputation would be bargained for in the initial transaction, so that it would not affect expected payoff—this result suggests that it’s partially bargained for but benefits that accrue over time may not be initially apparent. Prior relationship is positively associated with initial satisfaction but not longer-term—firms choose partners whom they view positively, but that positive view isn’t a strong predictor of a successful alliance. Shared decision making is indeed a positive predictor. Strategic similarities (manufacturing, raw materials, technology, marketing, customers) are positive predictors, but organizational process similarities (human relations, culture, structure, accounting and information systems) are insignificant or negatively significant. Author suggests that this contradicts popular concerns about “culture clash,” but doesn’t offer a theory to explain the distinction.


Using survey data from firms’ top executives, author conducts two-stage maximum likelihood test of a model of firm learning from collaboration. He introduces the concept of “collaborative know-how,” which consists of the abilities to: (1) identify and select potential collaborators; (2) negotiate and structure an effective collaborative agreement; (3) monitor and manage ongoing collaborations; and (4) know when and how to terminate a collaboration. Author finds, first, that greater collaborative know-how is positively associated with the firm’s receiving greater tangible (strategic and financial) and intangible (knowledge-based) benefits from its most recent collaboration. Second, he finds a significant relationship between collaborative experience and collaborative know-how. However, results of his analysis also reveal that there is no direct relationship between experience and tangible or intangible benefits. He argues that firms tend to learn from experience, but that experience is valuable only if firms internalize the lessons of their collaborative experience.
Kulwant Singh, The Impact of Technological Complexity and Interfirm Cooperation on

Using logistic regressions on the U.S. hospital software systems industry (1961-1991), offers support for the hypothesis that the greater the complexity of technology a business develops, the more likely it is to fail—because of greater difficulty of developing appropriate multiple competencies, and greater costs of coordination and development of performance reliability. Rejects alternative hypotheses that firms’ technological change and technological expansion drive failure, though there is some evidence that technological diversity also predicts failure among low-complexity firms.

Hypothesizes that alliances will reduce the risk of failure more for high-complexity businesses than for low-complexity, because high-complexity firms are more likely to benefit from sharing knowledge and competencies, and alliance-based coordination of activities. Finds very weak support for this hypothesis: high- and low-complexity firms do not reduce probability of failure through either technology-related or non-technology-related alliances, while medium-complexity firms have increased probability of survival (significant only at .10 level) for technology-related alliances, but not for non-technology-related alliances.

Toby E. Stuart, Network Positions and Propensities to Collaborate: An Investigation of
Strategic Alliance Formation in a High-technology Industry, 43 Administrative Science Quarterly 668 (September 1998)

Event-history and negative binomial dyad models used to explain the decision to form strategic alliances within the semiconductor industry. Hypotheses focus on crowding and prestige to predict alliance formation. Results support expectation that greater crowding of a firm’s technological position to be associated with greater alliance formation, because firms in similar positions can better evaluate and internalize one another’s technological know-how, and better share information and costs; moreover, other firms seek out those in crowded positions for the opportunity to bundle or integrate with one of the market’s core products. Prestige also appears to be positively associated with alliance formation, because high-prestige firms can generate publicity and consumer interest from alliances with other high-prestige firms, and can get favorable contract terms from lower-prestige alliances. Finally, results indicate that the crowding effect is smaller for high-prestige than low-prestige firms, because high-prestige firms tend to have the knowledge stock necessary to expand into areas outside their past specialization.

B. MANAGEMENT THEORY ON MAKING ALLIANCES WORK


Qualitative study of six rural enterprise alliances in the U.S., Spain and China, identifies five features of the alliances that potentially significantly alter the tasks of public managers. First, public organizations must be prepared to respond flexibly to demand programs—programs generated by agencies themselves and tailored to the needs of agency clients. Second, increased self-management in public and private funding operations means that government agents serve more as partners than as compliance administrators. Third, because government cannot easily enforce cooperation among
self-managing fund recipients, it must instead focus on identifying necessary information and incentives to induce agencies to serve the common client and make appropriate choices. Fourth, because such alliances are often not funded to scale, the public sector’s efforts at leverage, attracting private commitments and resources, are often critical. Finally, public sector organizations, like other agencies in alliances are “de-differentially structuring,” becoming less hierarchical, serving more as resource brokers and seed capital, their status as the public sector less important than their technical knowledge and network position.


Empirical study of local government agency partnerships in implementing geographic information systems (GIS) technology. Sample size is small—35 agencies. First, authors consider whether differences exist between partnership and single-agency arrangements on a range of outcomes, based on the perceptions of experts within the focal agency. Kruskal-Wallis H tests indicate no significant difference between single department, multi-department and interinstitutional arrangements in terms of perceived improvements in productivity and performance, decision making, and customer service, though the total cost of single-agency arrangements was marginally significantly lower. Second, authors examine which characteristics of partnership arrangements are associated with more successful outcomes. They find that complexity of the project—the number of autonomous actors—has a negative impact on productivity, decision making, and customer service outcomes. Decentralized decision making, which is hypothesized to have a negative impact on outcomes by encouraging stalemates and logrolling, is negatively associated with productivity and customer service. Resource interdependence, which is predicted to be associated with positive outcomes because resource sharing will lower costs and stimulate more efficient use of those resources, does in fact lower costs, but it is negatively associated with productivity and decision making. Authors suggest that sharing resources may force participants to reach agreements in a larger number of domains, thus complicating the effort to complete tasks. Authors also hypothesize that formality of the project will be associated with positive income because it will lower uncertainty costs of completing tasks. While formality is positively associated with productivity and customer service, it also significantly raises the project’s costs. Authors note that the study cannot sort out whether formality leads to higher costs or whether agencies taking on more complicated projects are more likely to make formal arrangements. Finally, authors find that the perceived ability of leaders to facilitate commitment to the project has a significant positive effect on productivity, decision making, and customer service.


Article offers a grounded theory analysis of SEMATECH data, designed to help explain how cooperation can arise in an industry that has been highly competitive. Authors argue that complexity theory—the idea that the self-organizing of complex
ordered systems arises from apparent chaos—is critical to understanding cooperation at SEMATECH. First, the notion of form arising from chaos fits SEMATECH, which arose within an industry in decline and disarray. The industry had reached a bifurcation point, a juncture at which a growing consensus of the problem’s severity was sufficient to overcome inherent tendencies toward equilibrium. Second, SEMATECH’s early processes were self-reinforcing—members systematically searched the industry for best practices, while non-directive leadership permitted them to structure situations and attitudes to fit evolving needs. Complexity theory says that a bifurcation point is not enough, that achieving a new order requires that the system remain open to change and attract new energy. Thus the third application of complexity theory was in the new organizational form, which allowed SEMATECH to experience unintended consequences (for example, founders had not envisioned that a large portion of resources would go to help the supplier industry rather than SEMATECH members); the consortium’s emergence was permitted to depend on inputs of new energy. Suggested implications of the SEMATECH experience include the importance of an initial degree of trust and someone to start contributions to interorganizational cooperations. SEMATECH did not follow a traditional exchange model, but rather members recognized that not everyone could get equal value at all times, and had faith that their efforts would be rewarded at some time in the future.

Rose Marie Ham, Greg Linden, & Melissa M. Appleyard, The Evolving Role of Semiconductor Consortia in the United States and Japan, 41 California Management Review 137 (Fall 1998)

Authors use the recent establishment of semiconductor consortia I300I in the U.S. and Selete in Japan to illustrate governments’ and private firms’ changing role in directing technology development in the semiconductor industry. While the highly influential SEMATECH in the U.S. and VLSI in Japan were financed solely by member companies. Both arose out of the need to make a costly conversion to larger silicon wagers, but there are also significant differences. The U.S. industry was in a position of relative strength when I300I was initiated, and perhaps as a result, members chose to fund a project much less ambitious than the major development effort that was originally suggested. Selete, on the other hand, formed when the Japanese industry was losing market share, and Japanese manufacturers, who had once entered into VLSI reluctantly, initiated the cooperation, and started an ambitious program. Authors seem to draw three main lessons from the two. First, periods of “collective crisis” lead to “collective action,” with more comprehensive industry-wide collaboration—Japan’s efforts in Selete are analogous to the more elaborate SEMATECH partnership that came when the U.S. industry was in crisis. Second, though both of the recent collaborations were privately funded, it is probably far too soon to project an end to government’s influence. Selete was initiated in conjunction with a large, publicly funded initiative, suggesting that, given the critical nature of semiconductors as inputs, government is reluctant to ignore industries’ competitive performance, and firms may be more willing to turn to government when they start to struggle. Third, commitment to an industry-wide vision has its downside amid uncertain technologies. Both Selete and I300I have found that the development of the larger silicon wafer was delayed by unexpected complexities—committing so many of an industry’s firms to a plan to develop this technology means
that they have collectively taken large losses and many have seen their careful plans made irrelevant.

Michael Indergaard, Making Networks, Remaking the City, 10 Economic Development Quarterly 172 (May 1996)

Case study of flexible manufacturing network (FMN) in Toledo used to illustrate argument for an institution-building approach to networks. Author distinguishes between resource mobilization and social mobilization in network building. He argues that American FMN initiatives typically follow a resource mobilization approach, in which the broker—a business veteran or technical expert—coordinates interfirm cooperation. In these networks, practitioners tend to report struggles with group process, with overcoming the competitive mindset, with generating participation, managing differences among people and firms, and defining a network agenda. By contrast, the Toledo project focuses on social mobilization. The project sponsors set clear goals from the beginning, developed ground rules from those goals, but leaves participants room to plan their own agenda for fulfilling those goals. It allows a fairly broad base of people to initiate projects, including community organizations, specially recruited innovative firms, and change agents from within the network. It brokers collaborative encounters between firms, customers, and the community, in order to develop trust and group formation. The central lesson of the Toledo approach is that FMNs should attend to social processes, developing participatory capacity and forming weak ties that will allow the project to explore many possibilities before committing to a strategic opening that meets community development needs.

C. PREDICTING THE DECISION TO ALLY


Authors present and test a theory to predict how businesses form alliances to develop and sponsor technical standards. They argue that a firm has two considerations in calculating whether to join a particular alliance. First, a larger alliance has a higher value because the size is an indicator of the likelihood that the alliance will succeed in getting its proposed standard adopted. Second, because the firm would prefer not to have its success shared by its rivals, it will be less likely to join if distant rivals are members and even more unlikely to join if close rivals are. Authors formulate a utility function that incorporates each of these considerations, and then argue that the alliances that are stable will be the ones that constitute a Nash equilibrium (no firm can get higher utility from switching alliances). They test their theory by comparing predicted alliances to actual alliances for firms sponsoring Unix operating system standards in 1988, and find that the model correctly predicts the alliance membership of eight of the nine firms and 97% of the aggregate market size.

Pat H. Dickson & K. Mark Weaver, Environmental Determinants and Individual-Level Moderators of Alliance Use, 40 Academy of Management Journal 404 (April 1997)
Logistic regressions on data from 433 Norwegian manufacturing firms on two sets of hypotheses. First key idea: Managers perceive and respond to uncertainty on many dimensions. Hypotheses: Key managers distinguish among multiple dimensions of environmental uncertainty based on their source; that their decision to use alliances is positively associated with high general uncertainty, high technological volatility and demand, unpredictable customers and competitors, and demands for internationalization; and that alliance use is negatively associated with key managers’ perceptions of the firm’s strong potential for growth and profits. Results support all of the hypotheses, except that customer and competitor predictability is negatively associated with alliance formation—author suggests that perhaps some minimal level of perceived predictability of the market must be present for alliances to be seen as productive.

Second key idea: Managers’ beliefs and values moderate uncertainty’s influence on alliance formation. Hypotheses: Environmental uncertainty has less influence over entrepreneurial managers’ decision to ally, and greater influence over collectivist managers’ alliance decisions; collectivist/individualist orientation also moderates relation between entrepreneurial orientation and alliance decision. The study indeed reveals significant interactions among at least two of the uncertainty dimensions and managers’ entrepreneurial and collectivist orientations. The orientations do not directly influence alliance formation, but shape how key managers assess uncertainty.

Shantanu Dutta & Allen M. Weiss, The Relationship Between a Firm’s Level of Technological Innovativeness and Its Pattern of Partnership Agreements, 43 Management Science 343 (March 1997)

Authors construct a theory around the relationship between a firm’s level of innovation and its entrance into partnership agreements, and test the theory using a multinomial logit on probability of having a specific pattern of agreements. They predict that the higher the firm’s level of innovativeness: (1) the higher the number of licensing agreements it will have relative to joint venture agreements; (2) the higher the number of marketing agreements relative to joint venture; and (3) the higher the number of marketing agreements relative to licensing. They argue that innovative firms will want to protect their base of tacit knowledge from expropriation, and that licensing minimizes the possibility of such a transfer. The three forms represent a continuum of expropriation risk—marketing someone’s products is much less likely to require sharing tacit knowledge than is joint ownership of production assets. All of the above hypotheses are supported by the analysis, which examines partnership agreements between 1990 and 1991 between U.S. firms and other U.S. or foreign firms, and which measures innovativeness by patent citations. Authors argue that concerns that innovative firms are leaking too much knowledge may be unfounded if these firms are choosing partnership agreements that minimize the knowledge sharing.

Ranjay Gulati, Social Structure and Alliance Formation Patterns: A Longitudinal Analysis, 40 Administrative Science Quarterly 619 (December 1995)

Dynamic panel model of alliance formation in large firm dyads attempts to unite resource dependence and network explanations. Author finds that firms that are strategically interdependent are more likely to form alliances than those that are not. He also finds support for a set of relational hypotheses, that firms with a higher number of
past alliances are more likely to form new ones, because of the strong social connections that form; however, the relationship is U-shaped, because of finite opportunities for collaboration and fears of overdependence. Moreover, the likelihood of alliance diminishes with the amount of time that has passed since the last alliance. He also offers, and finds support for, the structural hypotheses that firms with more common third-party ties will be more likely to ally, as will those with a shorter path between them in a network of prior alliances. Finally, he unites the structure and interdependence hypotheses, showing that interdependent firms with common third-party ties are more likely to ally than noninterdependent firms with similar ties; and that interdependent firms connected through a given set of ties are more likely to ally than noninterdependent firms with similar connections.

Ranjay Gulati & Martin Gargiulo, Where Do Interorganizational Networks Come From? 104 American Journal of Sociology 1439 (March 1999)

Article seeks to discover where organizations find cues to help them choose with which organizations to form an alliance, and how those cues shape the formation of networks. Using a random-effects panel probit model on longitudinal data from U.S., Japanese, and European firm dyads in selected industries. All of the hypotheses that follow received support in the results, though evidence for the similarity-in-centrality prediction is somewhat weak.

On alliance formation, they first hypothesize that the probability of an alliance increases with the level of interdependence between the organizations in question. However, they suggest that this basic hypothesis is not enough to explain how organizations identify sources of environmental uncertainty and which partners would help reduce that uncertainty; they turn to embeddedness to explain the source of cues. Relational embeddedness suggest that cohesive ties offer a unique source of information about partners’ capabilities; they hypothesize that the probability of alliance is positively associated with the number of prior direct alliances between the two. Structural embeddedness suggests that organizations with ties to a common partner can get reliable information about one another, so authors predict that alliance probability increases with the number of prior indirect alliances between the organizations. Positional embeddedness says that network centrality both provides information advantages to the central firm (because of its larger “intelligence web”) and at the same time makes the organization more visible to potential partners; thus combined centrality of the two organizations also should positively predict their likelihood of alliance. Finally, because more central organizations are likely to see relatively few advantages in allying with a peripheral player, similarity in centrality should positively predict alliance.

A second set of hypotheses concerns structural differentiation—the extent to which actors in a network occupy positions with distinctive relational profiles. First, the probability of alliance is positively associated with structural differentiation, because the differentiation makes it easier for firms to distinguish among potential alliance partners. Second, the effect of interdependence on alliance probability decreases with greater structural differentiation, because differentiation provides an alternative set of cues about who is an appropriate alliance partner. However, they hypothesize third that the effect of positional embeddedness increases with structural differentiation, because differentiation makes differences in position more apparent.

Using a typology of alliance governance structures that differentiates by the amount of hierarchical control (joint ventures, minority investment, and contractual alliance, with the first being most hierarchical and the last least), authors construct a theory about which factors explain the magnitude of hierarchical controls. First, they predict that the greater the anticipated interdependence in an alliance, the more hierarchical the governance structure. They argue that hierarchical elements help firms to address coordination costs from interdependence, because they formalize and regularize planning and interactions. Second, they hypothesize that alliances with an expected technology component are more likely to choose hierarchical structures because technology tends to come with monitoring problems regarding what technology is being transferred and what are the limits on its use. Third, alliances in industries which are weak in protecting against appropriability will be more likely to choose hierarchical structures, and this effect will be stronger if the alliance has a technology component, because actors are likely to be more concerned about technological knowledge being appropriated. Fourth, alliances in which there is less trust between the partners will be more likely to choose hierarchy. The hypotheses are generally supported by the results of authors’ logit analysis. Authors argue that their findings illustrate the importance of both the economic perspective, which emphasizes appropriation concerns, and the organizational, which highlights coordination costs, in understanding the extent of hierarchical controls.

Marie Hojnacki, Interest Groups’ Decisions to Join Alliances or Work Alone, 41 American Journal of Political Science 61 (January 1997)

Author offers a model of interest groups’ decision whether to join an alliance or work alone. Generally, she assumes that interest groups are rational actors and that they will make the choice that maximizes their chances for advocacy success. A first consideration is issue context—she hypothesizes that: (1) groups with strong organized opposition will be more likely to ally because the appearance of broad support is more important; (2) those whose positions are opposed by relevant decision makers will be less likely to ally because there is no point in expending resources to build support for an allied effort that will likely lose; and (3) groups with narrow issue interests will be less likely to ally than those with broad issue interests. Second, their assessments and expectations of potential allies matter: (1) groups with past alliances will be more likely to ally because they have better information about allies’ skills and resources; (2) the presence of a “pivotal” group in the coalition will make the focal group more likely to join; and (3) recruited organizations will be less likely to join because the recruiter sends a negative signal about the resources it has to offer. Third, autonomy concerns suggest that: (1) groups facing greater competition for members and resources will be less likely to join lest they compromise their unique identity; and (2) organizations with purposive, as opposed to material, interests are less likely to join, as there are more substitutes for a purposive group that no longer seems unique. Finally, the interest group’s own character will influence the decision: (1) groups with social or public interests will be more likely
to join than those with corporate or tangible interests because those who represent expressive interests have to work harder to remain visible and maintain support than those representing more material concerns.

Author uses surveys of groups likely to be interested in five major issues, and probit analysis of the probability of joining a coalition for each organization. She finds significant effects in the predicted direction for strength of opposition groups, scope of issue interest, alliance experience, pivotal groups, and recruitment by potential partners. Autonomy and group character coefficients are not significant.