

SUPPLY CHAIN ALLIANCES: RHETORIC AND REALITY

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Abstract

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Abstract

Supply chain management implies an increased reliance on closer buyer/supplier relationships. This study used a multi-method (survey and interview) approach to determine the nature of alliance management in modern supply chains. One point regarding the present status of alliance management in today's supply chain world is clear—truly synergistic relationships are very rare. When asked to indicate the percent of their supply chain relationships that are true alliances, two responses were commonly heard. First, several managers quickly asked, “What do you mean by alliance?” This response revealed the fact that the word alliance is used to signify a wide range of relationship types. Second, many managers indicated a rather large percentage of relationships operate on an alliance basis. The interviewer then followed-up by defining an alliance as a collaborative or synergistic relationship that adds value above and beyond what is achievable through simple long-term contracts. When the definition of alliance was clarified and the emphasis was on “cooperatively working together” or “symbiotic relationships,” the managers inevitably adjusted their percentage dramatically downward. The end result was that the vast majority of the participants suggest that “synergistic working relationships” represent only a very small fraction of all supply chain relationships—typically 5 percent or less. Managers generally concurred that the distance between “preferred” supplier and “synergistic” alliance is quite large. A dozen alliance management tools and techniques emerged as somewhat important to absolutely essential to the development of synergistic alliance relationships.

Keywords: Alliance, Human Resource Management, Network, Supply Chain

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SUPPLY CHAIN ALLIANCES: RHETORIC AND REALITY

As the economy changes, as competition becomes more global, it's no longer company vs. company but supply chain vs. supply chain. —Harold Sirkin, 1994.

Great firms will fight the war for dominance in the marketplace not against individual competitors in their field but fortified by alliances with wholesalers, manufacturers, and suppliers all along the supply chain. In essence, competitive dominance will be achieved by an entire supply chain, with battles fought supply chain versus supply chain. —Roger Blackman, 1997.

Introduction

For several years, industry analysts have described a future day when the very nature of competition will be transformed. Their vision is of a competitive arena where cohesive supply chain teams compete against other supply chains (Bhattacharya et al., 1995; Fawcett and Magnan, 2001). Success or failure in this future world will hinge on the agility and strength of the supply chain team rather than on the competitive power of an individual company. Several forces are driving competition in this direction. Among the most important and implacable of these forces are 1) the emergence of more demanding, information-empowered customers, 2) the continued globalization of markets, which increases the number of competitive options available to the customer, and 3) the recognition by more and more managers that their companies lack some of the resources and competencies needed to achieve success in this evolving competitive environment (Cook and Garver, 2002; Das and Teng, 2002; Fine, 1998; Mehta, 2004; Tyndall, 1998). As these forces have converged, managers have begun to proactively look beyond their companies' organizational boundaries to evaluate how the resources of suppliers and customers can be used to create exceptional value (Bartholomew, 1999; Blackwell, 1997; Christopher, 1999; Dell, 1999; Nelson, 1998; Togar and Ramaswami, 2004). Thus, they have begun to form supply chain teams.

In a supply-chain-dominated world, companies will focus on doing exceptionally well a few things for which they possess unique skills and advantages and will outsource other essential activities to diverse channel members that possess superior capabilities in those specific areas (Cox, 1999; Gottfredson et al., 2005; Laseter, 1998; Quinn, 2000; Rich, 1997; Sheridan, 1999). In such a world, competitive success will depend on a company's ability to identify outstanding potential supply chain partners and then develop powerful supply chain alliances with them. Alliance creation and management will become a critical capability for successful companies. Given the implied importance of supply chain alliances to the success of emerging competitive strategies, managers and analysts alike not only need to understand more completely the status and impact of current supply chain alliance practice but also must be able to separate the rhetoric from the reality of alliance discussions to effectively formulate and implement their supply chain alliance strategies.

Our study addresses the issues of the current status of alliance management among supply chains, the barriers and bridges to successful supply chain alliances, best practices that maintain synergistic supply chain alliances, and several caveats to supply-chain alliance management. With these topics analyzed and discussed, and in an attempt "to tell the world something it did not know before," we conclude our findings with a prescriptive alliance developmental process for supply chain managers (Bazerman, 2005:29).

Background on Supply Chain Alliances

A supply chain is an intrinsically collaborative form of an "alliance constellation;" where multiple partner firms compete against a single firm or group of firms (Das and Teng, 2002:445; Gomes-Casseres, 1996; Boddy *et al.*, 2000; Klassen and Vachon, 2003). Supply chain alliances have become very attractive in recent years because of two loci of influence. First, outside

pressures exist from government regulation, technological innovation, and increased global competition (Das and Teng, 2002; Georgiadis and Vlachos, 2004; Murphy, 1988); and second, alliances offer significant benefits for supply chain partners. Some of the most often discussed benefits include improved productivity, increased product quality, increased product cycle times, decrease in overall costs, and overall competitive advantage (Fawcett and Magnan, 2001; Ferdows *et al.*, 2004; Fine, 2000; Lajara and Lillo, 2004; Lee and Whang, 2001). As displayed in Figure 1, supply chain alliances can vary in complexity and level of involvement from a firm's suppliers' suppliers to its customers' customers.

*** **Insert Figure 1 about here** ***

The sheer number of chain partners with their varying agendas and goals makes supply chain management extremely complex and difficult to implement. Managers must not only evaluate the potential value added of each chain partner, but also must decide how close and how long to maintain each chain relationship.

An alliance can be thought of as a point on a relationship continuum. On the one end we have pure transactional relationships (arm's length), and on the other end is an integrated cooperative relationship (strategic alliance; Mentzer *et al.*, 2000; Murphy, 1988; Webster, 1992). Between these two extremes, we find three hybrids of business relationships. Pulling from existing research on alliance facilitators and structure, we define the following five relationship types:

- **Transactional Relationship:** No formalized relationship; each transaction is made independently at arms length (Dyer *et al.*, 1998; van Hoek, 2000).
- **Basic Alliance:** Tactical relationship designed to establish basic level of trust and honest, open communication (McCutcheon and Stuart, 2000; Monczka *et al.*, 1998).
- **Operational Alliance:** Frequent communication regarding capacity & demand with joint problem solving (Mohr and Spekman, 1994; Monczka *et al.*, 1998).

- **Business Alliance:** Greater mutual dependence with specialized processes & unique products and services (Gao *et al.*, 2005; Murray *et al.*, 2005).
- **Strategic Alliance:** Long-term trusting relationship involving shared commitment/resources that deals with strategic issues (Monczka *et al.*, 1998; Sahay, 2003).

Figure 2 graphically shows this relationship continuum. Notice that both extremes have their benefits and limitations, and thus the hybrid strategies would have similar strengths and limitations as well.

In summary, as markets continue to globalize, firms have more and more been turning to supply chain alliances to provide a competitive advantage. However, managers face an uphill battle as to selecting the right partners upstream and down stream, selecting the number of partners to reduce chain complexity, and selecting the intensity of the relationship with those partners.

*** **Insert Figure 2 about here** ***

Methodology for Evaluating Supply Chain Alliance Practice

To effectively define the nature and scope of modern supply chain alliance practice, an empirical study was performed. The focus of our study was to answer the following question, “To what extent are alliance management techniques being effectively employed to build more cohesive and collaborative supply chain teams?” Further, an effort was made to identify the barriers and facilitators to more effective alliance management with the ultimate goal being to provide a roadmap complete with guidelines to help direct the establishment of competitive supply chain alliances. Because supply chain practices focus on processes that cut across functional as well as organizational boundaries, and extract “a more robust and generalizable set of findings,” a triangulation approach was employed (Scandura and Williams, 2000: 1250; Jick, 1979; Lewis, 1998). The triangulation method involved an extensive literature review, cross-functional mail

surveys, and in-depth case studies. The surveys focused on examining functional perceptions while the interviews evaluated channel perspectives of alliance management practice.

Cross-functional Mail Survey

To document how key functional managers view supply chain management, a mail survey methodology was adopted and targeted to three different groups of managers: purchasers, logisticians, and manufacturing managers. Based on the literature as well as a series of pre-survey interviews, a four-page instrument was developed. The initial survey was reviewed by several practitioners and academics who served as an advisory board. Their feedback was used to modify the survey instrument. A large-scale pre-test was conducted. Three mailing lists of approximately 1,500 middle and senior level managers were compiled from the membership rosters of the *National Association of Purchasing Management*, the *Council of Logistics Management*, and the *American Production and Inventory Control Society*.

The survey process followed Dillman's (1978) Total Design Method. Approximately 100 non-respondents from each group were telephoned to investigate why they had chosen not to participate in the study. Three answers dominated the responses: 1) the manager was too busy, 2) the manager is inundated by surveys and no longer participates in survey studies, and 3) the manager's organization has yet to adopt a supply chain philosophy. Non-respondents were also asked to provide basic demographic data so that respondent and non-respondent profiles could be compared. No differences were found. The pre-test results were reviewed and the survey was modified. New mailing lists were compiled. These mailing lists consisted of about 500 names. Each manager was telephoned and asked to participate. Approximately 20 percent of the telephone numbers were inaccurate. The mailing list was adjusted and the survey sent out. The

sample sizes, number of respondents, and response rates are shown in Table 1. The findings from the two mailings were compared and no statistical differences were found.

***** Insert Table 1 about here *****

Case Study Interviews

The case study method emphasizes in-depth qualitative analysis and provides an opportunity to contextualize survey findings (Ellram, 1996; McCutcheon and Meredith, 1993; Meredith et al., 1989; Yin, 1981). Therefore, it was determined that interviews would be conducted with leading companies at key stages of the supply chain. Five chain positions were pre-determined to allow cross-channel analysis (Eisenhardt, 1989). A total of 51 in-depth interviews were conducted, surpassing Yin's (1981) recommended sample size of 25 so as to provide compelling supported findings. The breakdown by channel position is as follows: 14 retailers, 13 finished goods assemblers, 12 first-tier suppliers, three lower-tier suppliers, and nine service providers. The average interview lasted from four to six hours with the shortest interview lasting a little over an hour and the longest taking over 10 hours. All interviews were conducted face-to-face, and promised confidentiality to facilitate candid responses. Case study participants were senior-level managers initially identified based on their participation at annual meetings of leading professional associations where they were presenting cutting-edge findings in supply chain management. In most instances, the interview was conducted with multiple managers from the host organization (the number of company representatives ranged from one to eight).

During each interview, a semi-structured interview guide was used. The guide was subdivided into general questions, questions on collaboration among the interviewee's company customers and suppliers, and key practices with particular chain members. The guide

questionnaire consisted of both open ended or rating scale questions, enabling a clearer perspective of each interviewee's responses (Spradley, 1979). To become intimately familiar with each case, structured case study write-ups were created to allow further analysis. Such an approach is central to avoiding "data asphyxiation" where enormous volumes of data overwhelm the analysis process (Pettigrew, 1990:281). Further, by becoming familiar with each case as a "stand-alone entity" allows for unique patterns from each case to become visible before generalized patterns are attempted to be applied in cross-case comparisons (Eisenhardt, 1989:540). None of the companies interviewed managed in a serious and strategic way beyond the first tier backward or forward. The insight gained by combining the surveys with the interviews yielded a robust view of current levels of commitment for supply chain integration as well as a prescriptive look at what types of commitment still need to be established to facilitate greater collaboration.

The Status of Supply Chain Alliance Management Practice

Experience with other strategic initiatives highlights the fact that a gap almost always exists between the rhetoric surrounding a phenomenon like supply chain alliance management and actual practice. This reality raises an important question, "How far have companies really progressed in their journey toward synergistic alliance management?" To begin to answer this question, the three groups of materials managers were asked to indicate the extent to which they agreed with 12 different statements that assessed the implementation status of key supply chain alliance initiatives (see Table 2).

***** Insert Table 2 about here *****

The fundamental principle driving supply chain integration is that closer, more cooperative relationships can yield mutually beneficial competitive advantage. The data in Table

2 suggest that companies are making some progress in managing alliance relationships; however, the progress is uneven and is most pronounced on the customer side. Three customer-focused practices received scores greater than five on a seven-point. Respondents believe that their firms are more effectively customizing products and services for key customers (mean=5.51), accommodating customers' special requests (mean=5.49), and adopting the key account approach to managing their best customers (mean=5.37). Establishing trust-based relationships with customers was also recognized as a relatively well-established practice (mean=4.86, rank=4). Customers appear to exert the greatest leverage in most dyadic relationships. As a result, respondent companies are particularly anxious to meet customers' needs and achieve greater customer loyalty.

The highest-ranked practice directed toward achieving better supplier relationships was the careful screening and assessment of suppliers prior to selection (mean=4.84, rank=5). Supplier selection is the most basic purchasing practice; thus, this finding reveals that purchasing organizations continue to receive less attention than downstream marketing activities. Even purchasers ranked rigorous supplier selection as less fully implemented than customer management initiatives (mean=5.10, rank=4). Moreover, companies have been significantly slower in establishing trust-based supplier relationships than they have been in building customer alliances (mean=4.37, rank=7). Another supplier-targeted practice that is widely used is the reliance on first-tier suppliers to manage upstream suppliers (primarily second-tier suppliers). Most efforts to manage second- and lower-tier suppliers go through the most important first-tier suppliers. The one exception is the use of second-tier purchasing contracts.

Finally, each of the practices used to formalize alliance management were viewed with a degree of skepticism. Only the use of written agreements or contracts received a score greater

than four; however, fewer than 50 percent rated this practice a five or higher (mean=4.08, rank=8). Likewise, fewer than one in three respondent companies use clear guidelines to create or to manage alliances. This finding emphasizes the notion that companies continue to manage alliances on a largely ad hoc basis. They persist in maintaining an inward focus, worrying about their own immediate bottom line performance. The relatively low scores for managing alliances on the basis of shared risks and rewards further manifest this reality. While a large majority of companies hesitate to share risks and rewards in all instances, they are particularly reticent when it comes to sharing upstream with suppliers. This finding is not surprising given the power asymmetry that exists in most relationships. The general perception is that customers tend to possess the leverage needed to capture a larger portion of the rewards while pushing the risks back onto their suppliers. This perception makes building relationships based on equal sharing a strenuous effort.

To summarize the findings from Table 2, gradual progress is being made in forming supply chain alliances. Advances are most pronounced in the areas of specific programs designed to better meet customer demands. Companies are clearly dedicating more resources to understanding and fulfilling unique needs of their most important customers. Supply-side relationships have not received the same attention or resource dedication. Perhaps most interesting is the overall lack of attention to formalizing the alliance creation and management process. That is, while the companies are establishing programs to enhance supply-chain relationships, they are not building the vital alliance management capability that will help them create truly synergistic supply chain teams. Most companies have yet to make the organizational commitment to building selective, long-term partnership relationships. They continue to hedge

their bets, seeking the benefits of closer relationships without making enduring investments in those relationships.

To further explore the state of alliance management, the three groups of materials managers were asked to indicate the extent to which certain alliance management practices acted as either a barrier or a bridge to developing more cohesive supply chain teams (see Table 3).

***** Insert Table 3 about here *****

Alliance Practices as Barriers to Cohesive Supply Chain Teams

Focusing first on alliance practices that are perceived as a barrier to team building suggests that shifting from transactional and often win-lose relationships is a significant challenge. Indeed, alliance management concerns are pervasive. Over 60 percent of the respondents noted that their organizations lack clear alliance guidelines (62.4 percent five or above). Alliance relationships are not easy to establish and require not only a change in philosophy but also a change in practice. Guidelines are needed to determine 1) which relationships merit partnership status; 2) the intensity of specific relationships; 3) how key resources like intellectual property are to be developed, shared, and protected; and 4) when an alliance should be modified or even terminated. Proven guidelines would take a lot of the guesswork out of alliance management.

Similarly, two-thirds of the respondents claimed that it is difficult to establish relationships based on shared risks and rewards. In a market that places huge emphasis on Profit and Loss statements and quarterly reports, companies are naturally inclined to maximize profits and economic rents. Most companies, especially those with market power, therefore find it difficult not to expropriate the economic benefits of alliance relationships. Despite this fact, dominant supply chain members demonstrate a desire to spread the risks of uncertainty with alliance partners. Sharing risks appears to be a much more attractive proposition than sharing

rewards. Moreover, even when the decision has been made to apportion risks and rewards equally, identifying and quantifying them can be extremely difficult. The third relationship barrier (identified by 56 percent of the respondents) involves a lack of willingness to share information with supply chain “partners.” Like sharing risks and rewards, the unwillingness to share information is an attitudinal barrier that arises from long-standing tensions that exist among channel members. A lack of trust makes it difficult to share sensitive information. Many managers simply do not feel that they can afford to share proprietary information.

Unfortunately, without open information sharing, strategic and tactical supply chain decisions are certain to be sub-optimized and future integration efforts jeopardized. This finding is further evidenced by the fact that just over half of the respondents claimed that organizational boundaries represent a serious obstacle to supply chain initiatives (mean score=4.49).

Traditional organizational boundaries endanger collaboration because they promote sub-unit loyalties and a desire to “protect turf.” Since people tend to hold tenaciously to their comfort zones, efforts to alter organizational boundaries and redefine roles and responsibilities among alliance partners almost always produce employee resistance. The bottom line is that substantive supply chain restructuring and reengineering initiatives are viewed as a threat and can easily agitate emotions and engender intense feelings.

Finally, about 50 percent of the respondents viewed the difficulty in evaluating the value-added contribution of each supply chain member as a serious challenge to integration. A fundamental SCM proposition is that companies seek to work with the best customers, suppliers, and service providers possible. This means that companies must be able to evaluate the value-added contribution and capabilities of potential “team members.” The survey responses suggest that managers recognize that measuring the contribution of each channel member is a challenge;

however, they are not overly preoccupied with this barrier. The interviews actually revealed that relatively few companies are actively engaged in systematically evaluating value-added contributions up and down the supply chain. As supply chain practices mature, this issue will likely take on a greater role in supply chain design and management. Overall, the lack of rigorous and proactive alliance management practices appears to represent a significant barrier to the establishment of world-class supply chain teams.

Alliance Practices as Bridges to Cohesive Supply Chain Teams

Interestingly, when the nature of the question shifted to a focus on the extent to which each alliance practice facilitates increased inter-firm coordination, none of the practices evaluated is viewed as having a remarkably positive impact on SCM implementation. Facilitation scores ranged from 3.76 to 4.21. Two possible explanations come to mind. First, none of the five practices is truly effective in bridging the barriers to alliance integration. Second, while there has been a lot of talk regarding supply chain alliances, organizations are not as advanced in adopting the practices that make true alliances a reality. The interviews provided some valuable context from which to interpret these results, suggesting that companies are somewhat behind in the actual implementation of specific practices. Further, the interviews also highlighted the fact that real supply chain alliance integration is a sufficiently complex undertaking that no single practice, or even group of practices, is capable of closing the cultural, emotional, physical, and strategic gaps that prevent synergistic collaboration.

Strengthening alliance relationships within a supply chain typically requires some degree of rationalization or simplification. This is done upstream through supply base rationalization (mean=4.21) and downstream through customer selectivity (mean=4.11). The sheer number of players involved in most traditional supply chains makes integrated SCM not just complex but

next to impossible. To reduce the complexity and enhance the organization's ability to more effectively manage the supply chain as a cohesive team requires a reduction in the total number of supply chain participants. It further requires that supplier and customer relationships be evaluated and classified, usually through some form of ABC classification. Close relationships are then formed with a very select group of supply chain partners—the most important of the “A” suppliers and customers. Few companies have the necessary resources to manage alliance relationships without having first rationalized and classified the supply base. Recognizing this, most organizations have undertaken rationalization initiatives. Based on the “facilitation” scores, these initiatives have been at least moderately successful.

Three additional alliance management tools and techniques—“clear partner selection guidelines,” “a well-accepted approach to sharing risks and rewards”, and “clear guidelines to manage supply chain alliances” were also evaluated. The highest ranked of these was the use of clear guidelines to select the best possible supply chain partners. Even among purchasers, whose primary job is to find and/or develop the best possible suppliers, this practice was ranked in the middle of the pack (mean=4.05). Ambiguity persists when it comes to determining who to work with on a collaborative, alliance basis. Indeed, most companies develop synergistic relationships with fewer than 3 to 10 percent of their supply base participants. As noted in the previous discussion of barriers, most companies struggle with the ability to share risks and rewards in a way that promotes trust and unity on both sides of the relationship. Only a little over a third of the respondents gave “shared risks and rewards” a facilitation score of a five or greater. Self-interest and skepticism are hard to overcome. Finally, the use of guidelines to manage evolving alliance relationships has yet to be recognized as an effective facilitator (mean=3.76). As difficult as it can be to define and enter into long-term partnerships, such relationships can be

even harder to cultivate on a continued basis. Overall, the responses regarding supply chain relationships indicate that simplifying the supply chain is easier than managing supply chain relationships for competitive impact.

Looking at the three response categories (status, barrier, and bridge) together yields a clear, consistent, and compelling conclusion—the vast majority of companies do not yet have the alliance skills needed to build a cohesive supply chain team.

Building Stronger Supply Chain Alliances

The interview results concur with the survey findings and emphasize one point regarding the present status of alliance management in today's supply chain world—truly synergistic relationships are very rare. When asked to indicate the percent of their supply chain relationships that are true alliances, two responses were commonly heard. First, several managers quickly asked, “What do you mean by alliance?” This response revealed the fact that the word alliance is used to signify a wide range of relationship types. Second, many managers indicated a rather large percentage of relationships operate on an alliance basis. The interviewer then followed-up by defining an alliance as a collaborative or synergistic relationship that adds value above and beyond what is achievable through simple long-term contracts. When the definition of alliance was clarified and the emphasis was on “cooperatively working together” or “symbiotic relationships,” the managers inevitably adjusted their percentage dramatically downward. The end result was that the vast majority of the participants suggest that “synergistic working relationships” represent only a very small fraction of all supply chain relationships—typically 5 percent or less. The reality is that many managers use the word alliance to signify the existence of a long-term contract or the establishment of a technology linkage. Likewise, the word “partner” is often used to describe a certified or preferred supplier or customer.

Practices that Form the Foundation for Synergistic SC Alliances

Managers generally concurred that the distance between “preferred” and “synergistic” is quite large. Building on strong relationships to establish true alliances is resource intensive and requires the use of a variety of tools and techniques that help evaluate and manage alliances. A dozen alliance management tools and techniques emerged as somewhat important to absolutely essential to the development of synergistic relationships. While most companies ascribe to one or more of the following alliance management techniques, none of the interviewed firms have every one in place.

- 1) A formal mechanism is used to identify potential alliance partners. “ABC” classification is a tool commonly used by participant companies to define relationship intensity. A continuum that ranges from occasional transactional relationship to synergistic alliance is used to characterize relationship strength. A companion approach is to establish formal guidelines to select alliance partners.
- 2) Formal guidelines are used to manage established alliances. Once an alliance is initiated, a set of policies and procedures is needed to guide everything from who key contacts will be to how resources will be shared and when investments will take place. The established guidelines should touch on all major aspects of alliance management.
- 3) Clear roles and responsibilities are defined and communicated. Both sides of an effective alliance must explicitly understand what is expected from them. Defining and stating roles and responsibilities help to make sure that important issues do not “fall between the cracks” and reduces the frequency and magnitude of alliance conflict.
- 4) Risks and rewards are shared on a mutually acceptable basis. Synergy demands that both sides of an alliance benefit from the relationship—real alliances cannot be one-sided relationships. The need to establish a mechanism for jointly sharing risks and rewards was the second most frequently cited key to alliance success. Managers consistently expressed concern that the company with greatest channel power benefits disproportionately from most supply chain relationships.
- 5) A problem resolution methodology must be in place. Even in the best of relationships, occasional misunderstanding or breakdowns occur. Successful alliances have an established and agreed-to approach to evaluate and resolve any problems that arise.
- 6) Clear and concise long-term contracts govern most successful alliances. Long-term contracts often run one to five years (a few contractual relationships of up to 10 years were found). One manager called a clear contract “the key” to alliance success. Long-term contracts that

guarantee a certain amount of business are used more than any other tool to foster strong supply chain relationships.

- 7) Technology linkages can be used to routinize information exchange. As suggested in previous discussions regarding information sharing, the connective technology must be supported by a policy promoting frequent, honest, and open information sharing. Establishing a formal information-sharing policy helps promote the efficient and willing exchange of accurate and relevant information between alliance partners. Information sharing facilitates trust-based relationships and is the third most frequently cited key to alliance success.
- 8) Confidentiality agreements are used to protect proprietary technologies and processes. Excellent companies like to partner with excellent companies. Furthermore, most companies that achieve a reputation for excellence have developed unique technologies or competencies that they anxiously protect. Therefore, confidentiality agreements are considered a requirement for collaborative relationships. The agreements should specify how any jointly developed technology will be used in the future.
- 9) A rigorous measurement alignment methodology helps keep alliance partners “on the same page”. Partners need to know how they are being evaluated as well as how they are actually performing. When both sides of an alliance use consistent measures to evaluate their own and each other’s performance, problems can be identified before they become crises. Fewer misunderstandings arise and lower-cost corrective action can often be initiated.
- 10) Continuous improvement clauses have become standard in most supply alliances. Companies want a commitment from their partners that assures continued superior performance over the duration of relationship. Improvement clauses target cost, quality, delivery, and innovation performance and specify both rewards and penalties. For example, increased volumes are often tied to improvement.
- 11) Dedicated alliance relations teams are increasingly used to foster “personal” relationships and establish continuity between alliance partners. Knowing the people on the other side of the relationship facilitates communication while reducing the time needed for problem solving and brainstorming activities. Dedicating resources to a relationship also demonstrates commitment and helps establish trust. Alliance councils provide many similar benefits on a larger, less resource-intensive scale.
- 12) Exit criteria should be spelled out at the very beginning of the relationship. A strong consensus emerged throughout the interviews that even the best of relationships can eventually become one-sided or cease to be mutually beneficial. In the minds of most of the interviewed managers, the long-term seldom means forever. As a rule, managers possess a strong desire to maintain some flexibility through exit clauses.

In addition to the tools and techniques identified by the interviewed managers, numerous less-tangible attributes and philosophies need to be cultivated to support effective alliances.

Foremost among these vital “keys” to alliance success is trust. No single word was mentioned more frequently than trust; yet, no concept remained more vaguely defined. Managers seemed to struggle with exact definitions of trust largely because trust has many different connotations. Further, many managers believe the word is overused, misused, and frequently abused. In some respects, trust fits the old description of “I’m not sure exactly how to define it, but I know it when I see it.” One of the challenges to building trust-based relationships is that trust has numerous antecedents including open and honest information sharing, commitment, clear expectations, and follow through. The passage of time, high levels of actual performance, and the fulfillment of promises also precede trust. Finally, real trust exists only when both sides agree that it does. Relationships that one party describes as trust-based are often viewed as less friendly and less mutually advantageous by the other side.

The attributes listed below were all described as fundamental elements of outstanding alliance relationships. The difficulty in measuring the extent to which each attribute is actually present combined with the lack of a precise formula for developing each attribute creates the air of intangibility. For some of the attributes, the most difficult aspect to measure is the “shared” or “collaborative” nature of the activity. When one partner consistently puts forth 70 percent of the effort and resources while the other contributes only 30 percent, tension is certain to develop. Perhaps the underlying characteristic of all the following attributes is an emphasis on bringing the two parties together to help each achieve greater success than they could alone.

- Collaborative/joint efforts
- Collaborative continuous improvement
- Creativity, innovation, and idea generation
- Cultural fit
- Mutual commitment to the relationship
- Mutual dependence
- Patience and perseverance
- Personal relationships
- Shared vision and objectives
- Trust
- Understanding of each other’s businesses
- Willingness to be flexible and tailor services

Collaborative Efforts that Reinforce Supply Chain Alliances

Efforts to build and leverage effective alliances focus on a variety of collaborative activities. The most frequently used approach to building strong supply-chain relationships is to provide quality and technical assistance. At a couple of the participant companies, channel partners have access to every class or seminar that is offered to internal employees. Leading supply chain companies recognize the need to do everything they can to help build the skills of the entire supply-chain team. An extension on the training motif is the increased use of process development teams to help supply partners dramatically improve their own capabilities. Several companies have dedicated a large portion of their process engineering staffs to assist key suppliers in process redesign efforts. A typical model involves lending a process development team to a supplier for a period of up to three months to work on a specific project. The current process is mapped and actual performance is documented. The process development team then actively engages the supplier's personnel to identify improvement opportunities. As ideas emerge, they are posted and prioritized. Action plans are brainstormed and implemented. Finally, results are quantified. Each person who contributes an idea is acknowledged and rewarded. By the end of the project, not only is the specific process improved but the supplier's employees understand the methodology and are ready and excited to test it out on other processes. Several other collaborative initiatives were described in the course of the interview process.

- 1) Continuous improvement suggestion programs. At one participant company, suppliers are encouraged to make suggestions for how the buying company can improve its process costs. Every suggestion is reviewed and feedback provided to the supplier within 20 days. When a suggestion is approved, the two companies collaborate to make "it" happen. The first year's savings are shared 50/50. Continuous improvement programs often go beyond cost and quality to target cycle time reduction, tailored services, and new product development.

- 2) Joint problem solving. Closer relationships facilitate collaborative problem solving. When a problem is discovered, a problem-solving team comprised of buyer and supplier personnel comes together to identify the root cause, brainstorm a resolution, and take action. Joint problem solving also can mitigate the impact of an unexpected disaster. For example, when one of Toyota's suppliers suffered a catastrophic fire that burned a key facility to the ground, a joint problem solving team was quickly mobilized to get a critical valve back in production. The factory had been the only source of the valve and Toyota only kept four hours worth of inventory on hand. As a result of this joint problem solving, Toyota's auto assembly plants were back on line within a week.
- 3) Collaborative pilot projects. Alliance relationships often provide the ideal setting to test new programs and validate innovative supply chain ideas. For example, when one participant company began to consider the adoption of Collaborative Planning, Forecasting, and Replenishment (CPFR), it looked to a channel partner that had proven to be a close ally in previous innovative ventures. The two worked closely to pilot test CPFR. The close working relationship removed many of the challenges inherent in the implementation process. The successful pilot test yielded outstanding results that were used to sell CPFR to other customers.
- 4) Shared resources. Many supply chain initiatives are too costly for a single member of the supply chain to afford to undertake them. On other occasions, a capital constrained supplier cannot make needed investments without assistance from a better funded ally. Under these, and other, circumstances, the sharing of resources between two alliance partners can greatly increase joint competitiveness. Participant companies frequently share technical expertise, financial assistance, personnel, and even third-party consulting services with partners in order to build unique and unsurpassed capabilities.

A natural outcome of supply-chain collaboration is the blurring or redefinition of organizational boundaries. Roles and responsibilities are shifted from one member of the supply chain to another based on who is best positioned to most efficiently and effectively achieve results. A critical caveat for any given company is to make sure that other supply chain members do not develop all of the competencies they possess. When this happens, that company becomes dispensable and can be role-shifted out of the supply chain. Such disintermediation is becoming a real threat and is altering the dynamics of many supply chains. Nevertheless, role shifting in the supply chain has become quite common, especially in the areas of quality control, new product development, and vendor managed replenishment. A fourth area—supplier integrated

manufacturing—is much less common, but its potential has captured the imagination of several of the participant managers.

- 1) **Quality Certification.** An emphasis on total quality has led to increased supplier certification, shifting the responsibility for quality to the supplier. Qualified suppliers assure acceptable quality performance, eliminating the need for incoming inspection and making dock-to-stock practices possible. Suppliers that cannot meet this quality expectation are eliminated from the supply base. Most of the participant companies employ quality certification programs.
- 2) **Integrated Product Development.** A desire to shrink concept-to-market cycle times has led to the use of multi-functional product-development teams, consisting of managers from marketing, research and development, manufacturing, purchasing, and logistics as well as representatives from key suppliers. The inclusion of suppliers on the team is a dramatic shift from traditional buyer/supplier roles. Instead of reacting to the buyer's new product needs after the product design has been set, suppliers bring both process and product technology expertise to the team from the very beginning of the design process. The payoff of changing roles and relationships is higher quality products that are brought to market with dramatically shorter development lead times. While not as popular as supplier certification, leading manufacturers are aggressively pursuing collaborative product development opportunities. At one participant company, a step-down product development approach is used to coordinate entire systems development across three or more tiers of the supply chain.
- 3) **Vendor Managed Replenishment.** Key suppliers increasingly locate their personnel on site at their customer's operations to obtain better forecast information. They also monitor inventory levels for their products, place orders, and handle all of the expediting and other issues involved in assuring timely product arrival. In many soft-goods retail settings, suppliers take responsibility for inventory as well as the floor display and promotion of their product. One participant company has developed an automated approach, involving specialized racks fitted with computerized sensors. These racks are located at the customer's facility. As product is withdrawn from the rack, the sensors measure inventory levels and automatically place an order when the reorder point is reached.
- 4) **Supplier Integrated Manufacturing.** Turning responsibility for assembly over to the supplier represents the most aggressive effort yet to shift roles in order to reduce costs and shorten cycle times. Dell's use of contract manufacturers and Volkswagen's truck assembly facility in Brazil that relies almost exclusively on suppliers for the assembly of the entire vehicle are the most publicized examples of this type of collaboration.

Caveats to Supply Chain Alliance Development

Alliances are the core building blocks of supply chains. Indeed, they are a microcosm of SCM, embodying and exemplifying many of the principles of channel integration. They not only show what might be possible through effective channel collaboration but they highlight some of the

challenges that supply chain proponents can expect to encounter. Insight gained during the interviews offers the following cautions.

- 1) Too many companies rely on size or channel power to motivate supplier cooperation and, in the minds of suppliers, to extract concessions. One of the participant companies used to have placards over the conference rooms where buyer/supplier negotiations were carried out identifying the rooms as the “Hammer” and “Anvil” conference rooms. The connotations conveyed by these titles were not lost on suppliers’ personnel. Two comments were commonly heard throughout the interviews. Customers tended to say, “They need us,” when talking about suppliers. By contrast, suppliers often lamented, “They constantly beat us up,” when referring to customers. Adversarial buyer/supplier relationships are still plentiful.
- 2) The power asymmetry that generally prevails in supply chain relationships manifests itself in the manner that companies do (or do not) share risks and rewards. At one participant company, suppliers are expected to hold four weeks of inventory at their production facility. Shared demand forecasts combined with supplier-held inventory assures greater flexibility in meeting unexpected demand surges. In return, the retailer promises to buy up to four weeks of inventory should sales fail to materialize. When a sales forecast proves overly optimistic, the retailer assumes the risk of the inaccurate forecast. At the same time, this company is always positioned to meet surges in demand. This type of risk sharing, unfortunately, is not the norm. Companies that possess greater channel power tend to hold on to a greater proportion of mutually generated benefits. When asked how his company shares rewards, one manager simply said, “We don’t do that.” A manager at a first-tier supplier shared the same general perception, but from the other side of the “power” fence. He expressed his opinion that a key customer was “very good at sharing risks and rewards. The buyer keeps all of the rewards and passes all of the risks on to us.”
- 3) A company’s position within the supply chain often determines how it sees the world as well as how it views role-shifting possibilities. For example, during one interview, a manager suggested that a key company goal is to increase the percent of product that it essentially holds “on consignment.” The goal is to take possession of product at its distribution center and manage it until it is sold, at which time it pays the supplier. This type of “pay at scan” strategy greatly improves the cash-to-cash cycle and asset utilization of the buyer while placing a greater financial burden on the supplier. The manager who shared this objective felt that this new role definition made perfect sense. When the topic of suppliers establishing alternative distribution channels via the internet, the manager reacted passionately, saying, “We would never tolerate that.” Fairness is still defined locally and usually in a company’s own best interest.
- 4) Many companies still do not have the supply side in full view; rather, they are focused expressly on the customer. Several managers noted that while their companies aggressively pursue partnerships with valued customers, they do not build supplier alliances. This unbalanced view of the supply chain suggests that supplier capabilities will occasionally be overlooked as companies to seek sustainable competitive advantage. For many companies, the supply side is still the lesser of two equals.

- 5) When it comes to alliance relationships, institutional memories are still very short. Consistently excellent performance is expected. Unfortunately, the notion that a supplier is only as good as its last performance pervades many mindsets. Certainly, commitment to supply chain varies from company to company; however, the general rule is that supply chain relationships are transitory. One company walked away from a relationship that had taken seven years to develop simply because it decided that other suppliers offered lower prices.
- 6) Most managers are focusing on the notion of appropriateness. Partnering is appropriate only in a very small percentage of relationships. All other relationships are to be managed at much lower levels of resource intensity. The key is to identify the best supply chain “partner” to fulfill a specific need and then establish the appropriate relationship with that company. Appropriateness ranges from adversarial to synergistic.

The Alliance Development Process

Pulling from the survey data and interviews, we posit a three stage process for alliance development. Each phase contains several initiatives to be implemented by the supply chain manager.

***** Insert Figure 3 about here *****

Stage One: Internal Planning

Before managers jump with both feet into an alliance partnership it is critical that know who there partners will be and what is expected of all the players involved. As discussed earlier, supply chains can vary in complexity—with chain complexity increasing (decreasing) as the number of partners increase (decrease). The number of alliance members and what there roles shall be are two facets of the develop processes that managers have some control over.

When evaluating potential partners, not only must managers select partners who are technologically and process compatible, but they also must consider whether the partners are culturally compatible to provide a synergistic relationship. Leading supply chain teams have

gathered such information by performing analyses of chain and individual firm processes, evaluating collaborative opportunities, and finally assessing the potential benefits of alliance efforts.

Stage Two: Collaborative Planning

The next stage turns the focus away from the internal management coordination to open coordination outside company walls. After the manager has evaluated and selected the key suppliers and customers, it becomes necessary to begin coordination with the new chain partners. Such coordination requires frequent meetings to discuss, evaluate, and validate the benefits yielded by chain initiatives. As the numbers become more clear, strategies can be formulated, and the alliance relationship begins to strengthen. However, for chain initiatives to be supported by all chain member management, partners must identify how performance and progress will be measured, and design and follow a time-line to measure the alliance's progression and impact. Such analysis is necessary if supply chain managers hope to receive moral and monetary support from department executives.

Stage Three: Day-to-Day Management

The last stage is critical if the alliance is meant to survive long-term; however the locus of challenge—for the main—lies in the hands of the individual firms' employees. After alliance partners have coordinated and planned chain initiatives, the challenges now begin to escalate. Supply chain managers must monitor their firm and their partners' performance daily to assess progress, share appropriate risks and rewards, and jointly design and implement solutions to daily problems. As progress is measured and benefits evaluated, managers are able to consider contingencies and prepare for them by adapting or design new initiatives to counter dynamic competition. Further, as alliance partner mature further into the relationship, it is highly probably

that certain chain members will be either more resourceful or damaging to the alliance's profitability. This contingent approach allows the alliance to be adaptable while continually giving incentive to partners to improve their operations so they do not become obsolete. If it comes time that certain alliance members feel it appropriate to part ways, rationale must be identified for alliance dissolution and members may then exist in accordance to the guidelines established in stage two.

In summation, the alliance development processes allows supply chain managers to continually appraise the value of their firm's relationships and what extent they should be pursued. An alliance is not static, and will only survive if its members allow flexibility and ability to evolve so as to meet dynamic demands from customers, government regulation, and economic change.

Conclusions

Companies today are much more aware of opportunities to improve organizational competitiveness through closer, partnership relationships and have moved away from the adversarial model that dominated buyer/supplier relations for much of the 1900s. However, few managers have completely abandoned the notion that channel power can and should be used to advance their companies' positions. The result is that more collaboration is taking place in modern supply-chain relationships, but it is taking place on a very selective basis. Managers are willing to pursue tighter buyer/supplier relationships when they perceive that it is in their best, immediate interests. Moreover, they are becoming more proficient in utilizing the tools and techniques that foster synergistic relationships. Their companies are also making some slow progress in assimilating the attributes that will enable more collaborative ventures, but most managers remain somewhat opportunistic, limiting their ability to build truly cohesive, mutually

advantageous supply chain teams. Table 4 highlights the areas where the greatest progress has been made while pointing out that much work remains to be done.

***** Insert Table 4 about here *****

We have further provided a conceptual model for integrating effective alliances within supply chain networks. Our hope is that the current model stimulates theoretical and practical tests and a better understanding about the bridges and barriers to successful alliance management in supply chains.

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Figure 1: A Simplified Supply Chain

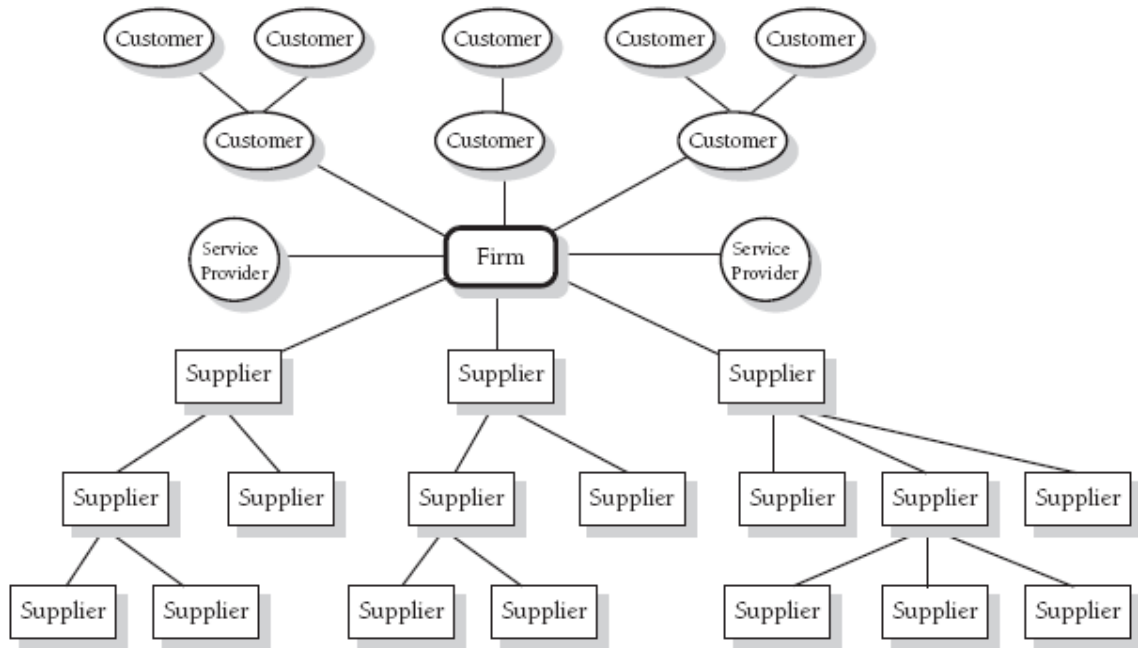


Figure 2: The Relationship Continuum

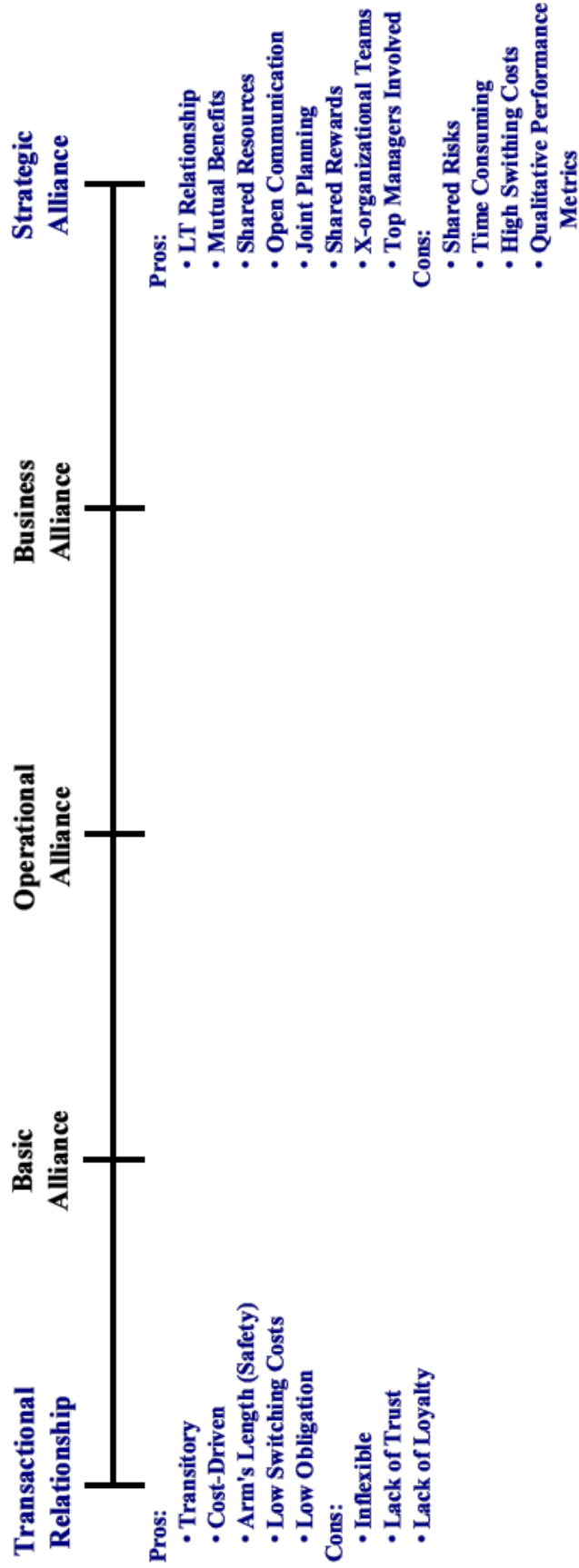


Table 1: Survey Samples and Response Rates

Pre-Test:	<u>Adjusted Sample Size</u>	<u>Completed Surveys</u>	<u>Response Rate</u>
NAPM	1,329	96	7.2%
CLM	1,369	129	9.4%
APICS	1,351	109	8.1%

Pre-Notification:	<u>Adjusted Sample Size</u>	<u>Completed Surveys</u>	<u>Response Rate</u>
NAPM	370	84	22.7%
CLM	398	76	19.1%
APICS	328	94	28.7%

Table 2: Status of Supply Chain Alliance Initiatives

ALLIANCE MECHANISMS	Combined			Purchasing			Manufacturing			Logistics		
	Mean	R	% 5-7	Mean	R	% 5-7	Mean	R	% 5-7	Mean	R	% 5-7
Custom products/services	5.51	1	78.00	5.50	2	76.90	5.67	1	81.40	5.35	2	75.80
Accommodate customer needs	5.49	2	81.20	5.51	1	82.90	5.61	2	82.50	5.35	3	78.40
Key customer accounts	5.37	3	77.60	5.36	3	78.60	5.30	3	76.50	5.44	1	78.20
Trust-based customer alliances	4.86	4	66.60	4.93	6	70.20	4.92	4	72.30	4.73	15	57.90
Supplier screened & assessed	4.84	5	64.20	5.10	4	71.70	4.67	5	56.90	4.80	14	65.20
Suppliers manage upstream	4.65	6	57.70	4.98	5	65.20	4.60	6	64.20	4.41	19	52.00
Trust-based supplier alliances	4.37	7	49.60	4.72	7	61.40	4.28	7	49.50	4.15	22	39.80
Written alliance contracts used	4.08	8	45.80	4.04	9	43.80	3.89	8	43.10	4.30	20	50.30
Shared rewards/risks upstream	3.90	9	35.70	4.27	8	49.40	3.63	9	26.80	3.86	30	32.90
Alliance creation guidelines	3.69	10	31.50	3.81	10	33.30	3.48	11	25.10	3.79	32	36.30
Alliance monitoring guidelines	3.66	11	30.70	3.68	12	30.00	3.53	10	24.80	3.79	33	37.10
Shared rewards downstream	3.57	12	28.30	3.79	11	35.40	3.39	12	24.10	3.55	37	26.40

Indicate the extent to which you agree with the statements as they relate to your SC. (1=Strongly Disagree, 7=Strongly Agree)

Table 3: Alliance Practices as Barriers or Facilitators to Building Cohesive Supply Chain Teams

<i>Barriers to SC Teaming*</i>	Combined			Purchasing			Manufacturing			Logistics		
	Mean	R	% 5-7	Mean	R	% 5-7	Mean	R	% 5-7	Mean	R	% 5-7
Lack clear alliance guidelines	4.87	1	62.4	4.74	1	59.3	4.87	1	63.6	4.97	1	68.5
Lack shared risks & rewards	4.83	2	65.6	4.73	2	61.1	4.76	2	66.3	4.97	2	64.0
Lack willingness to share info.	4.56	3	56.1	4.56	3	54.0	4.36	4	49.5	4.74	3	64.5
Organizational boundaries	4.49	4	52.4	4.42	4	52.4	4.37	3	48.3	4.67	4	56.1
Measuring SC contribution	4.32	5	49.2	4.31	5	50.3	4.21	5	47.0	4.44	5	50.8
Bridges to SC Teaming†	Combined			Purchasing			Manufacturing			Logistics		
	Mean	R	% 5-7	Mean	R	% 5-7	Mean	R	% 5-7	Mean	R	% 5-7
Supply base reduction	4.21	1	42.8	4.50	1	58.4	3.93	2	37.7	4.25	2	47.3
Customer selectivity	4.11	2	43.5	3.89	4	38.6	4.01	1	47.1	4.39	1	55.0
Clear selection guidelines	3.97	3	38.2	4.05	2	45.5	3.69	3	33.4	4.19	3	47.9
Sharing risks and rewards	3.83	4	35.6	3.99	3	44.0	3.63	4	29.6	3.90	5	43.7
Clear alliance guidelines	3.76	5	32.0	3.81	5	35.9	3.43	5	23.6	4.03	4	45.5

* To what extent do the above act as barriers to supply chain integration? (1=Not a Barrier, 7=Serious Barrier)

† To what extent have each of the above facilitated increased inter-firm coordination (1=Not a Facilitator, 7=Effective Facilitator)

Table 4: Current Status of Alliance Management

Points of Progress	Deficiencies
Greater efforts to understand customers	Excessive dependence on leverage
Tailored services more widely used	Synergistic alliances are rare
Greater efforts to train & certify suppliers	Alliances viewed as transitory
Use of continuous improvements clauses	Different definitions/perceptions of trust
Use of long-term contracts	Do not share risks and rewards
Alliance management procedure understood	Integration usually ends with first tier
Collaborative improvement initiatives	Alliance management tools not used
	Institutional memories are short

Figure 3: The Alliance Development Processes

