# Sourcing Strategy and Supplier Relationships: Alliances vs. eProcurement

in *The Practice of Supply Chain Management*, Kluwer Publishers, C. Billington, H. Lee, J. Neale, T. Harrison editors, 77 - 89, 2003.

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**Abstract**

In this paper, we examine the impact of eProcurement and strategic alliances on corporate sourcing strategies. We present a framework we developed to help managers focus on the relevant issues for sourcing decisions. We illustrate the framework with different types of sourcing relationships in practice and provide advice on what type of relationship may be most effective in specific situations.

## 1. Introduction

Sourcing strategies for both materials and services have rapidly shifted in leading firms all over the world. With the driving force of outsourcing and the rapid adoption of web enablers, traditional approaches to sourcing have been literally up-ended. Not long ago, each plant in the General Motors network employed a multitude of low-level buyers who worked the phones from vast seas of desks – each buyer leveraging his or her relationships to extract the lowest price from a local marketplace. With the growing complexity of the components procured, the knowledge requirement of buyers themselves increased, along with an increase in the level of coordination required between buyer and seller. This pushed many companies towards building longer-term relationships with key suppliers. Buying companies built procurement teams with stronger technical expertise and a longer-term focus with the suppliers. On the other hand, suppliers needed to be more flexible and willing to take greater risks in co-developing customized products. Yet at the same time that those companies were building strategic alliances, the forces of globalization further focused procurement on achieving low cost. Coupled with the ability of the web to bring many suppliers into head-to-head competition, procurement managers are faced with vexing questions. When should alliances be pursued? What materials and services are suitable for web auctions? Could auctions be possible for complex products or services? Could strategic alliances exist in the presence of the bruising competition found in Internet exchanges?

After several years of buying and selling on the web, the experience gained from the boom and bust of many public and private exchanges has given us many clues to these questions. In this paper, we provide some background on eProcurement and

strategic alliances. Then, we explore these questions and present a framework we developed to help managers focus on the relevant issues for sourcing decisions. We illustrate the framework with different types of sourcing relationships in practice and provide advice on what type of relationship may be most effective in specific situations.

## 2. Successful Relationships – Alliances and Exchanges

In reaction to the shifting currents of globalization, outsourcing, and technology, leading firms have taken remarkably different approaches to managing their suppliers. Some firms have pursued strategic alliances and partnerships, while others have pushed ahead into the competitive on-line world. For example, General Electric rushed onto the web well before many firms had even thought of using the web to automate procurement, while companies like Boeing and Daimler-Chrysler have carefully managed strategic alliances. In this section we will look at these two extremes before offering guidance on how to structure a relationship.

### *On-line procurement*

From the earliest days of the web, General Electric moved aggressively to begin buying components through its Trading Process Network (TPN). That network became the testing grounds for further expansion into eBusiness in all areas of the GE organization. On TPN, parts specifications were posted electronically and many prequalified suppliers could bid for the job. There was little face-to-face interaction, and costs were extremely low. For instance, GE estimated that the cost of processing a traditional paper purchase order was more than $50, while the cost on the TPN dropped to $5. GE quickly exceeded $1 billion worth of business with 1,400 suppliers on the

TPN (Smart (1996)). In the language of economics, the TPN approaches *pure competition*. The length of the bidding process at GE decreased from 21 days to 10 days, and the percentage of business going to foreign suppliers increased significantly.

The early success of companies like GE led to a near stampede toward eProcurement. Clearly most large organizations have found that procurement of indirect materials like office supplies and services like travel, can be effectively transferred to the web. Software suppliers like Ariba, made their debut with cataloging software that made it easy for companies to move from traditional phone and fax procurement to web-based buying. Likewise, exchanges for direct materials exploded in 1999, with each industry drawing multiple on-line entries hoping to capture the spending power of buyers. The early success of on-line auctioneer Freemarkets.com led many to believe that every industry would quickly embrace marketplaces where dynamic bidding would become the standard for purchasing everything from steel to legal services.

But auction services alone soon proved to be far from a compelling value proposition (Johnson 2000). What many had missed when they saw Freemarkets' success was the hours of preparation that went into each bidding event. Whether Freemarkets was auctioning coal or street cleaning contracts, much of the success that was achieved from the on-line auction was the result of good old-fashion procurement consulting. For example, writing comprehensive RFQs so bidders would feel comfortable with specifications, finding a set of highly qualified suppliers, researching the cost structure of those suppliers and understanding their ability to lower their costs. Freemarkets also helped the suppliers prepare their bids and the buyers evaluate the bids after the auction was completed (Tully 2000). All of these ensured that when bid day came, prices would drop and suppliers would deliver high quality products. Without

detailed knowledge of the market and solid procurement services, the vast majority of the industry exchanges found themselves open for business, but with nothing to buy or sell. Within months, most of the public exchanges shuttered their websites. Even many of the industry consortiums, such as Converge and Covisint, found it difficult to get their own members transacting on their exchanges. However, the sluggish adoption faced by the consortiums was not simply a failure of web-based procurement or on-line auctioning. Rather, many large companies had found it more effective to run their own exchanges behind closed doors – away from the prying eyes of their competitors. For example, HP, who was a founding member of Converge, quietly set up their own private exchange and began running millions of dollars of purchasing through it rather than Converge. Clearly eProcurement, from catalogs for indirect purchases to auctions for large purchases of direct material, will flourish for years to come. The question we will address later is, what purchases should be taken on-line and where does eProcurement fit in a well-rounded sourcing strategy?

*Strategic Alliances*

The second major trend of the past decade has been the move toward *strategic alliances*.[1] In fact, alliances went through their own boom, with companies quickly accumulating many such relationships. Dyer, Kale, & Singh (2001) found that by 2001, the top 500 global businesses had an average of 60 major strategic alliances *each*. Apparently, Wall Street valued this trend because the stock price jumped an average of about 1% with each announcement of a new alliance. One procurement executive from a large consumer packaged goods company told us that he wanted *all* his supplier

relationships to become strategic alliances. The senior vice president in charge of purchasing at a major U.S. industrial manufacturer once remarked that "we love sole source relationships." Yet despite this enthusiasm, Dyer et al. (2001) found that almost half of all alliances fail – which leads one to wonder: What are strategic alliances? Why do companies pursue them with such passion? And what lessons can be gleaned for managing them?

Fundamentally, a strategic alliance is a relationship between two trading partners that entails multifunctional interaction – from engineering and marketing to production planning, inventory and quality management. Companies articulate many goals for these relationships, goals that center around cost reduction, quality improvement, better delivery performance, or increased flexibility to new product introduction. If the focus is on cost reduction, we often observe deep interaction between inventory managers, production planners, and procurement personnel. If the focus is on new product development, engineers from both companies may be engaged in sharing future designs and product plans.

A popular way to depict the shift from traditional relationships to strategic alliances is through the butterfly-diamond diagram. Figure 1 shows a version of this diagram used by Wegman's supermarket chain in Rochester, New York, but we have seen identical versions at a number of companies. The butterfly represents traditional relationships where there is one point of interaction between the trading partners – a buyer and a salesperson. The diamond, on the other hand, represents the contact observed in a strategic alliance where there are multiple points of interaction.

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[1] See for example Cusumano & Takeishi (1991), Dyer (1993), Dyer (1996), Helper & Sako (1995), Liker

True strategic alliances endure for a long time. For example, over a ten-year period, Chrysler's average contract length nearly doubled (Helper & Sako (1995), Dyer (1996), Pyke (1998)). Longer-term relationships should be more cooperative than traditional ones and firms with many alliances should have far fewer suppliers. DuPont managers argue that it is in the best interest of DuPont and its suppliers to cooperate since suppliers' costs become DuPont's costs and suppliers' nonstandard product often becomes DuPont's nonstandard product. This cooperation can lead to dramatic improvements. DuPont worked closely with a supplier of maintenance, repair, and operating supplies and cut its inventory by $118 million over ten years, while the supplier saved $16 million annually. Chrysler reportedly saved over $1 billion in 1996, and twice that in 1998 – all from supplier-generated ideas (Dyer (1996), Pyke (1998)). In a similar vein, GM recently climbed to No. 4 on the J.D. Power and Associates overall quality ratings, just behind Nissan. Now GM is working on closing the gap with Toyota and Honda. How? By working with suppliers! For example, GM has given complete design responsibility for car interiors to Lear and Johnson Controls. This initiative allows suppliers and GM to focus on core competences, and it results in significantly faster new product introduction (Muller & Kerwin (2001)). John Deere's Construction Equipment Division now outsources over 80% of the value of some of its products. By working with key suppliers, Deere was able to reduce cycle times from 32 days to two days, while reducing costs by up to 25% (Sheridan (1999)). Clearly, the evidence suggests that firms engaging in strategic alliances gain improvements in cost, quality, delivery and flexibility!

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& Wu (2000), McMillan (1990), and Womack, Jones, & Roos (1991).

So if alliances are so effective, why not form these relationships with suppliers of all purchased components, materials, and services? And why have researchers found that over half fail? We address the first question in the next two sections, and we focus on the second when we glean some lessons for managers in Section 5.

## 3. Relationship Styles

In spite of the passion for strategic alliances and the surge of interest in eProcurement, we claim that the relationship style should fit with the characteristics of the purchased component and of the marketplace. Table 1 lists characteristics of five types of supplier relationships: buy-the-market, ongoing relationships, partnerships, strategic alliances, and backward integration. Even though backward integration might not be considered a form of supplier relationship because the components are produced internally, we argue that it is an important option to consider. Backward integration represents the closest form of an alliance.

GE's TPN is an example of a buy-the-market relationship. Buying from one firm today implies no commitment to buy from that firm next month. Interaction between firms, as in the GE case, can be computerized. There is little need for face-to-face meetings. As firms move toward ongoing relationships and partnerships, they are responding to a need for deeper and broader interaction with the supplier. Investing in an ongoing relationship, Toyota helped a small U.S. manufacturer of bumpers to improve cost, quality, and delivery (see, for example, Pickernell (1997) and Liker and Wu (2000)). Contracts in this case generally last the life of the vehicle model, say three to five years. However, if the supplier is not involved in the development of the next generation product, there is no implied commitment for the longer term. Strategic

alliances, as discussed above, involve even closer relationships – co-location of facilities or personnel, extensive sharing of information and plans, higher levels of trust, and even, in some cases, limited business with the partner's competitors (see for example Shapiro & Isaacson, 1994).

Often firms will engage in many different styles of relationships and migrate those suppliers among the different styles depending on their performance. For example, Air Products and Chemicals, a global manufacturer of chemicals, gas, and equipment, has developed a multi-tiered system of rating suppliers. Suppliers whose quality, cost or delivery performance is weak are labeled "not certified." Air Products actively tries to move volume away from these suppliers. Suppliers whose performance is adequate and improving are labeled "certifying," while suppliers who demonstrate long term superior performance are fully "certified." Air Products offers long-term contracts to certified suppliers and actively seeks to expand their share of the business. While Air Products maintains these different relationships, they are focused on developing suppliers into long-term partners and even strategic alliance partners.

**4. How to Structure the Relationship**

How should managers structure their own supplier relationships? In other words, how far to the right on Table 1 should they move? We will argue that there are four fundamental factors that should drive a firm toward closer relationships. These factors should be considered in light of the operations objectives of the firm – cost, quality, delivery and flexibility (Table 2). Firms should focus on their critical objectives as they analyze relationship styles for each component category.

The first factor is the *strategic importance* of the purchased component. If the component is critical to competitive differentiation or involves proprietary know-how, it is best to manufacture it in-house. If the firm cannot develop the capability to manufacture the component, it should form a close alliance with available suppliers, as Boeing has done. Airplane engines are clearly of strategic importance to Boeing. In fact, it might manufacture its own were it not for the huge financial cost and a 1934 government mandate separating Pratt & Whitney and United Airlines from Boeing. On the other hand, most maintenance, repair and operating (MRO) supplies have little strategic value to the buyer. There is rarely a need for a close relationship with an MRO supplier.

The second factor is the *number of suppliers* that can provide the component or service. If only one supplier is available, the firm may need to maintain close relationships with it. The relationship between Ford and Lear Corporation, a manufacturer of seat assemblies and other parts, provides an interesting example (Walton (1997)). Johnson Controls is the only other major supplier of seat assemblies, so it might be expected that Ford would form a strategic alliance or partnership with one of these firms. In fact, Lear has a long-term contract with Ford, and Ford shares plans about new car development programs with Lear. But Lear also sells seat assemblies to Ford's competitors. Unfortunately, what appeared to be an ideal partnership ran into some snags in the area of flexibility and new product development. In the 1996 redesign of the Taurus, Lear designed the seat assemblies while Johnson Controls designed the rack on which the assembly rides. Ford mistakenly treated Lear more like a buy-the-market supplier, focusing almost exclusively on unit cost and delivery time. The result was a multitude of problems that had to be fixed in the late stages of development. If Ford had

focused more on the need for flexibility and treated Lear more like a partner, these problems could have been avoided. Yet many strategic relationships face real challenges. For example, Hewlett-Packard has a long-standing strategic alliance with Canon because Canon is one of a very few suppliers that can produce high quality engines for laser printers. While HP dominates the market for printers, Canon continues to sells its own printers that compete with HP.

The third factor is *complexity* of the interfaces between the component procured and the rest of the final product and the complexity of the supply chain itself. Boeing has strategic alliances with three engine manufacturers — GE, Rolls Royce PLC, and Pratt & Whitney Co. — partly because the small pool of suppliers makes it important to have back-up partners, partly to reduce the financial risk of new airplane programs and partly because of the extremely complex interfaces between the engine and the airframe, which must be designed in conjunction with each other. During the new product development process, engineers from Boeing maintain offices at suppliers' facilities, and supplier engineers have offices at Boeing. Boeing has similar, but less intense, alliances with suppliers of a multitude of other parts. Because the inbound logistics process is so complex, Boeing relies on constant communication and sharing of data in partnerships with suppliers of less critical parts. This is the only way it can bring together several million components at the right time to ensure on-time delivery of its airplanes. The enormity of this task was highlighted in the late 1990s by Boeing's difficulties with component delivery and the resulting late delivery of planes.

The fourth factor that drives relationships closer is *uncertainty*. Here again we focus on the four operations objectives of cost, quality, delivery, and flexibility. If a sourcing relationship creates high uncertainty in the realm of the objectives that are

important to the buying firm, it should develop closer relationships. In the 1970s, DuPont relied on oil as a primary feedstock for many of its products. Because cost and delivery were critical objectives to DuPont, and because the oil supply shocks generated very high uncertainty about the price and availability of oil, we might have expected DuPont to develop a strategic alliance with an oil firm. In fact, DuPont went even further. It backward integrated with the purchase of Conoco, primarily to reduce this uncertainty. On the other hand, by pre-qualifying all TPN suppliers, GE knows that when it puts part specifications on the Internet, the suppliers who bid on those parts can make them correctly. If GE is uncertain about the quality of a given part because of new materials or processes, one suspects that it will not use the TPN. Likewise, many companies have been successful with buy-the-market relationships with MRO suppliers since there is little uncertainly about product quality. This is why the TPN appears in the quality row of Table 2.

An outdoor apparel firm provides an example of the danger of a buy-the-market strategy when there are uncertainties in quality. In a continuing search for lower labor cost, this firm switched suppliers, on average, every 18 months. As wages in one Asian country increased, they moved to another supplier until wages in that country also increased. With the rapid supplier changes, their two-year internal process to qualify supplier quality could not keep up. In the end, they often had to open every box from new suppliers and inspect every garment in the U.S., paying U.S. wage rates. If garments had to be repaired, they had to fix them in the U.S., again paying U.S. wage rates, since there was not time to ship them back to Asia, repair them, and ship them back. This island-hopping firm competed, in part, on high quality, and yet it pursued buy-the-market supplier relationships. In a time-sensitive market like seasonal apparel, gambling with

quality to reduce product cost can be a disaster! The uncertainty about garment quality, and the importance of this objective, suggests that it should have developed ongoing relationships with a set of suppliers. We would not recommend a strategic alliance since a cut and sew operation is a well-understood, commodity service. However, ongoing relationships would certainly be warranted.

Sometimes the four factors can pull the choice of supplier relationship in different directions, so managers need to weigh carefully the benefits and risks associated with each factor. For example, in its truck assembly plant in Resende, Brazil, VW designed a system in which seven major parts suppliers not only manufacture the parts with their own equipment but also install them on the truck using their own workers. VW lowered its capital investment, reduced union pressure due to multiple workforces, and cut its inventory investment. New product development was facilitated because of the proximity of VW and the suppliers, and VW reduced its risk when the market downturn of the late 1990's occurred. On the other hand, VW experienced other risks with quality, especially at the interfaces of different suppliers' parts during assembly, but also with delivery because of the complexity of coordinating inbound logistics (Woodruff (1996)).

The important lesson in all of these cases is that managers must explicitly consider the operations objectives of cost, quality, delivery and flexibility, and that they must understand the concepts of strategic importance, number of suppliers, complexity and uncertainty in determining how to structure their supplier relationships.

**5. Managing Relationships**

Finally, once the decision on relationship style is made, firms must actively manage the relationships. From our conversations with over a hundred managers and

application of the economic concepts of competition and monopoly (Henderson & Quandt, 1980), we have developed a set of important lessons.

*Strategic Alliances*

The benefits of strategic alliances, as noted above, are many. Firms can see lower cost, higher quality, and improved delivery performance. Perhaps the most significant benefit, however, is faster new product introduction. When Eaton, an $8 billion manufacturer of automotive components and electrical equipment, develops alliances with their customers, they focus on the customer's total cost of ownership (Table 3). And the results have been exceptionally positive for both Eaton and their customers.

Strategic alliances, however, do not come without risks for both buyers and suppliers (Table 4). For example, Chrysler shocked suppliers with their announcement in late 2000 that all suppliers must tear up existing contracts and cut prices by 5% (Green (2000)). Chrysler had been famous for sharing gains with suppliers and being a fair and trustworthy partner. Why the sudden change? Clearly the company had been under tremendous pressure since the merger with Daimler Benz and the subsequent downturn in the industry. In addition, Green points out that consolidation in the supplier base left the automotive assemblers with little competition to turn to if a supplier's progress lagged. In other words, the alliances appear to have dulled the competitive edge.

How should managers respond to these issues? First, they should strive to maintain more than one supplier for each component. That way, each supplier knows that a competitor is waiting in the wings. When a firm cannot source from a second supplier, or when it only has a small number of suppliers for a given component, it should always be searching for potential competitors. Existing suppliers, therefore, must

continually improve or face the possibility of lost volume. What we are saying, in effect, is that firms who find themselves on the right side of Table 1 should introduce elements of the left side, i.e. competition. Second, firms can motivate their suppliers to continue to support the alliance by working closely with them to improve efficiencies and costs. The incentive is that the final products will be more successful in the marketplace, and therefore both parties benefit. Finally, Dyer et al. (2001) notes that firms should create an alliance management function whose role is to coordinate alliances internally, develop knowledge about how to manage alliances, and develop clear performance measures for them.[2] Companies that have this function exhibit a 63% success rate for strategic alliances versus 49% for firms that do not. Dyer et al. show that the stock market gains are higher as well.

For their part, suppliers in strategic alliances should strive to maintain a competitive edge even if there are no competitors who pose an immediate threat. In other words, they should not take advantage of their monopolistic position. Eaton is a sole supplier for many of its products, and yet they regularly build cost decreases into long-term contracts. Furthermore, they devote significant engineering resources to co-development of new products with their customers. Following Eaton, it would be wise for monopolistic suppliers to analyze the total cost of ownership for their customers and be certain that the relationship is win-win. In sum, they should act as though competition is looming.

*eProcurement*

[2] See also Handfield, Krause, Scannell, & Monczka (2000) and Inkpen & Ross (2001).

Several years ago we moderated a discussion of about thirty automotive suppliers on the subject of eProcurement and on-line exchanges. When we asked them about the risks and benefits for suppliers and buyers, the response was consistent and passionate: buyers stand to gain and suppliers stand to lose – period. They argued that buyers could reduce unit costs, decrease transaction and processing costs, and take time out of the purchasing process. The big gain, of course, was driving down unit costs. While much of this is true, buyers do face some risks (Table 5). If specifications are not nailed down, quality could suffer. And they risk alienating key suppliers and even putting some suppliers out of business if margins erode too drastically.

Suppliers, on the other hand, risk losing margins and investment funds for development and training. In our meeting, the suppliers expressed fear that buyers would use information from the bidding process and give the contract to a firm that was not necessarily the low bidder. However, suppliers could benefit from knowledge of the winning bids, allowing them to gauge how to bid on the next auction. They could also use the exchange to dump excess inventory, use excess capacity and reduce selling costs. On balance, however, this group (as many we have worked with) felt that the risks outweigh the benefits.

How should managers respond to eProcurement? We believe that buyers should take a long-term view and actively avoid squeezing suppliers. Maintaining a broad and capable supplier base is critical for many components. Furthermore, they should consider building a relationship with some suppliers, even if the relationship is initially founded on buy-the-market purchases. Of course, if the firm is buying MRO supplies, a relationship may not be necessary. Suppliers who must sell to eProcurement customers *must* know their cost structure very well so they can bid appropriately. And they should

seek ways to provide value-added services and product or service bundles allowing them to differentiate themselves from their competitors. If possible, they should seek to build relationships with their customers, demonstrating that they are trustworthy and capable of a longer-term relationship. In other words, firms that find themselves on the left side of Table 1 should introduce elements of the right side, i.e. relationships.

## 6. Conclusions

As firms outsource an increasing amount of the value of their products, managing supplier relationships has become critical. Some consultants, managers and academics have promoted strategic alliances as the holy grail of supplier relationships, only to be shouted down by e-commerce gurus who argue that all purchases should be taken to the Internet. Perhaps we are observing a pendulum effect between extremes, or perhaps it is an inability to discern basic human nature and fundamental economics. We propose a middle ground. Careful analysis of the operations objectives of the firm and the number of available suppliers, in conjunction with an examination of the uncertainty, complexity and strategic importance of the component being purchased, yields a clarified recommendation of how to structure supplier relationships. Thus, within the same firm some components should be purchased through strategic alliances while others purchased via a partnership, on-going relationship or buy-the-market approach. We also make recommendations for managing these relationships. Firms that decide to pursue strategic alliances should strongly consider introducing competition into the relationship, while firms that buy over the Internet should consider building longer-term relationships. The results are sure to be worth the effort.

Table 1: Characteristics of different types of supplier relationships

| **Buy the market** | **Ongoing Relationship** | **Partnership** | **Strategic Alliance** | **Backward Integration** |
|---|---|---|---|---|
| Arm's length<br>Clear parts specifications<br>Computerized interaction<br>Significant business with competitors | Medium-term contracts<br>Some sharing of information<br>Some business with competitors<br>Good management relationship | Longer-term contracts<br>Extensive sharing of information<br>Increased trust<br>Limited business with competitors | Long-term relationship<br>Full sharing of information and plans<br>Limited or no business with competitors<br>Extensive trust and merging of cultures | Ownership of the supplier<br>Full sharing of information and plans<br>One culture |

Adapted from M. A. Cohen and N. Agrawal, *An Empirical Investigation of Supplier Management Practices,* Operations and Information Management Department, University of Pennsylvania, 1996; and M. T. Flaherty, *Global Operations Management*, McGraw-Hill, 1996.

Table 2: Examples of how objectives can affect the choice of supplier relationship

| **Operations Objective** | **Buy the market** | **Ongoing Relationship** | **Partnership** | **Strategic Alliance** | **Backward Integration** |
|---|---|---|---|---|---|
| Flexibility | Ford/Lear during the Taurus redesign: failed because focus on cost and delivery alone | | Ford/Lear **proposed**: due to *few suppliers* and *complex interactions* among components with a new product | Boeing and major suppliers: succeeded because extremely *complex interactions* among components | |
| Quality | MRO supplies: succeeded because little *uncertainty* about final quality, and not *strategically important*<br>GE TPN: succeeded because little *uncertainty* about quality<br>Outdoor apparel firm: failed because focus on cost alone | Outdoor apparel firm **proposed**: due to *uncertainty* about quality | | Boeing and engine manufacturers: succeeded because *strategically important* part with *few suppliers*<br>HP – Canon: succeeded because *few suppliers* | |
| Delivery | | | Boeing: succeeded because c*omplex inbound logistics* | | DuPont / Conoco: succeeded because high *uncertainty* about oil availability |
| Cost | | | | | DuPont/Conoco: succeeded because high *uncertainty* about oil prices |

Table 3: Total Cost of Ownership

| **Supplier's Selling Price** | | |
|---|---|---|
| **Procurement Costs** | | |
| •Supplier Certification | •Purchase Order | •Receiving |
| •Supplier Development | •Accounts Payable | •Inspection |
| •Proposal/Quotation | •Materials Mgmt | •Value Engineering |
| **Processing Costs** | | |
| Design | Quality | Logistics |
| •Cost to Design | •Scrap •Damage | •Material Handling |
| •Test | •Rework •Warranty | •Inventory |
| •Installation | •Returns •Service Calls | •Obsolescence |
| **Process Failure Costs** | | |
| •Cancellation Charges | •Lost Production | •Parts Proliferation |
| •Price Premiums | •Schedule Misses | •Duplication of Resources |
| •Overtime | •Delayed Product Intros | |
| •Stock Outs | •Equipment Downtime | •Supplier Switches |
| •Expediting | •Special Inspection | |

Table 4: Risks and Benefits of Strategic Alliances

| **Benefits to Buyer** | **Risks to Buyer** | **Benefits to Supplier** | **Risks to Supplier** |
|---|---|---|---|
| Decreased total cost of ownership<br>Increased quality<br>Faster response<br>Enhanced new product development with supplier involvement<br>Highly skilled supplier base<br>Fewer suppliers to manage | Increased transactions cost per supplier<br>Supplier becomes monopolistic, less responsive | Locks in the business<br>Ability to increase skill<br>Ability to make long term investments<br>Higher margins | Limited opportunities for new business, particularly with alliance partner's competitors<br>Capacity locked up by partner |

Table 5: Risks and Benefits of eProcurement

| **Benefits to Buyer** | **Risks to Buyer** | **Benefits to Supplier** | **Risks to Supplier** |
|---|---|---|---|
| Decreased unit cost<br>Decreased transactions and processing cost<br>Faster response | Decreased quality<br>Loose specifications<br>De-skill supplier base<br>Fewer suppliers over the long term<br>Alienate suppliers | Access to new business<br>Use excess capacity<br>Knowledge of winning bid | Lower margins<br>Decreased ability to invest in improvements<br>Startup costs for new software<br>Buyer uses information to generate off-line bids |

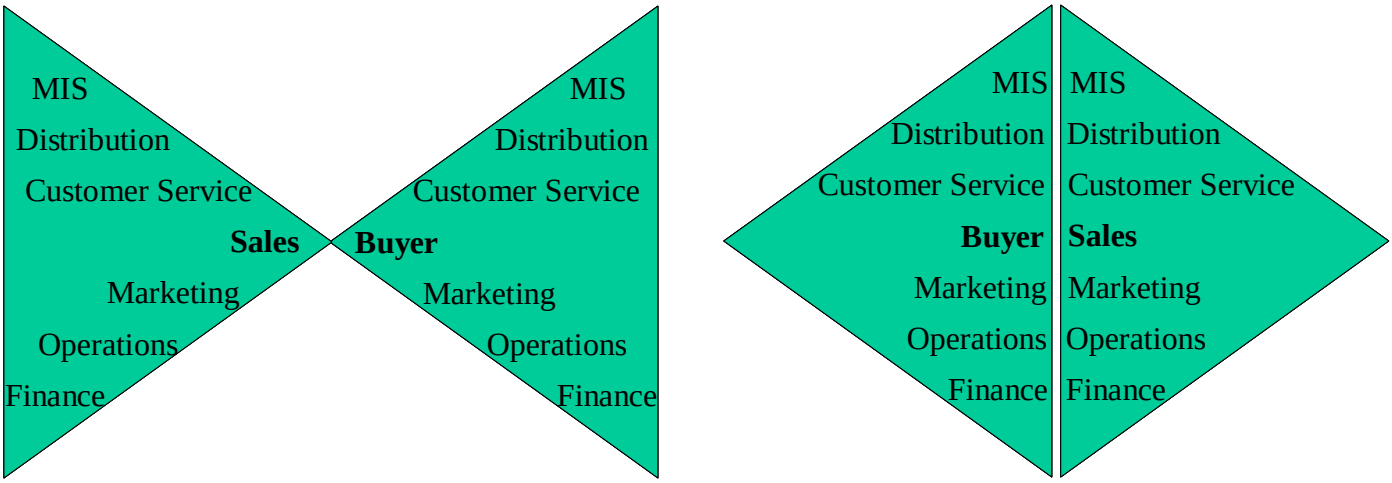


Figure 1: Butterflies and Diamonds

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