Proactive Supply Management: The Management of Risk

BY

Larry R. Smeltzer and Sue P. Siferd

***Larry R. Smeltzer** is a Professor of Supply Chain Management at Arizona State University. He earned his Ph.D. degree from Northern Illinois University. Dr. Smeltzer's research interests include buyer-supplier relationships, alliance development, and purchasing strategy. He is currently researching the role of purchasing in supply chain management and development of buyer-supplier alliances.*

***Sue P. Siferd** is an Associate Professor of Supply Chain Management at Arizona State University. She earned her Ph.D. degree from The Ohio State University. Dr. Siferd's research interests include service operations management, quality and productivity, process analysis, and total cost of ownership. She is currently researching quality and ethics in the supply chain, disaster planning and recovery management, and mass customization in the supply chain.*

C.P.M. A.P.P. ALERT Module 4

International Journal of Purchasing and Materials Management © Copyright January 1998, by the National Association of Purchasing Management, Inc.

IN BRIEF

Proactive supply management is a frequently used phrase, yet no agreement exists about its precise meaning. This article argues that proactive purchasing management is risk management, a perspective that evolved from case studies of the purchasing function. To better understand risk management from the perspective of purchasing management, it is analyzed within the context of transaction cost theory and the resource dependency model. Evidence is provided from the case studies that risk management is an appropriate framework for understanding proactive purchasing management. Examples of risk management through proactive purchasing activities are presented.

INTRODUCTION

In this area of quickly changing corporate environments, purchasing managers are encouraged to be proactive. Spekman and Hill[1] stated that purchasing managers need to develop a more proactive strategic approach, and Rajagopal and Bernard[2] encouraged a proactive approach to purchasing planning.

Proactive Purchasing

Insight into the meaning of proactive purchasing management is gained from an examination of purchasing textbooks. Leenders and Fearon[3] discuss five major categories of purchasing strategies:

1. Assurance of supply
2. Cost reduction
3. Supply support
4. Environmental change
5. Competitive edge

They also discuss many specific strategic purchasing opportunities which could certainly be considered proactive. Examples include backward vertical integration, outsourcing, establishing supplier quality assurance programs, supplier development, supplier-purchaser data sharing, and risk-sharing with the supplier. Henritz, Farrell, Giunipero,

The authors wish to thank the Center for Advanced Purchasing Studies (CAPS) for its support of this research.

and Kolchin[4] identify several substantial risks that occur when purchasing is not included in the strategic-planning process. These risks include threats to supply assurance, possibility of improper supplier selection, problems with environmental constraints, increased company liability, and uncertainty of supply and lead time. When these perspectives are combined, a view of proactive purchasing begins to emerge. Dobler and Burt[5] provide additional insight about the term "proactive". They contend that the purchasing discipline is moving from a transaction perspective to a supply management orientation. As this transition occurs, two shifts in focus are occurring:

1. From internal processes to value-adding benefits
2. From tactical management to strategic management

Burt[6] highlights the importance of developing integrated systems for design, procurement, quality, inventory management, and production in order to move from a reactive purchasing activity to a proactive procurement system which will add value to the firm's operations. Burt recognizes that "procurement of material and services is a process that cuts across organizational boundaries, and implementation of an integrated procurement system results in proactive procurement, as distinguished from reactive purchasing."[7]

Burt and Pinkerton[8] define proactive procurement management as "the process of professionally and aggressively adding value during the four stages required for effective procurement." The four stages include:

1. Determining what to buy
2. Identifying and developing the appropriate relationship with the supplier
3. Obtaining the lowest total cost associated with purchasing and converting the required material or service
4. Ensuring that the required material or service is received in a timely manner and that future supply will be available[9]

The concept of proactive purchasing management is also addressed by Carr[10] who defines proactive purchasing as purchasing's willingness to take risks and to effectively use current knowledge to make decisions about the future. Carr contends that purchasing proaction includes purchasing foresight and purchasing's willingness to initiate change. Carr's study of purchasing strategy included responses from 739 purchasing managers. The study shows a positive correlation between the level of strategic purchasing and proactive purchasing, but the strength of the correlation is low. In a second analysis, Carr shows a stronger, and statistically significant ($\alpha<0.05$) relationship between proactive purchasing and management of the supplier market/base.[11] The findings lead to the conclusion that relationships exist between risk, strong pursuit of objectives, early supplier involvement, and careful management, development, and evaluation of suppliers. It is important to note that Carr[12] views risk as integral to proactive purchasing management.

Reactive Purchasing

To understand proactive purchasing management, reactive purchasing management must be considered. One way to view reactive purchasing management is to think of the purchasing function as only reacting to internal customers.[13,14] This is the traditional approach in which the purchasing department receives a purchase order from some other department and proceeds to place that order with a supplier. The purchasing department then follows the purchasing process to assure that the order is placed and that the goods are received in a timely manner. If goods are not received on time, a crisis may develop to which purchasing must react. In this situation, the purchasing department is largely a transaction-oriented, clerical function that services other functions within the company and generally has low status in the firm.[15] More time is spent expediting than planning.

The reactive purchasing function is largely evaluated on two criteria: administrative costs and savings on material expenditures. Typical metrics are requisitions filled per employee, cost per requisition or total number of employees per dollar spent, and cost reductions accomplished by the purchasing group. The focus is on controlling administration costs and on negotiation skills that result in reduced contract costs. Adversarial relationships with suppliers may be encouraged.

Risk Management

The position presented here is that proactive supply management is qualitatively different from reactive supply management. Also, it is more than integrative procurement management and more than strategic purchasing management. Proactive supply management is concerned with a significant additional issue: risk management.

This hypothesis regarding the relationship between risk management and proactive purchasing management evolved during a qualitative research project. The objective of the original study was to analyze the factors that contribute to purchasing management's influence on strategic decisions. As frequently occurs with qualitative research, findings or relationships emerge other than those initially anticipated.[16]

Building on this research, risk management is explained in the context of two theoretical concepts: transaction cost theory and resource dependency model. After these two concepts are reviewed, the results of the case studies are reviewed and evidence presented that proactive supply management is risk management.

RESEARCH PROCEDURES

Qualitative Methodology

This research was clearly exploratory so case study methodology was appropriate.[17] The study was conducted using generally accepted qualitative techniques.[18] Information was first obtained from key individuals using a semi-structured interview format. During the first interview within a company, a list of other key individuals was developed and information such as organizational charts, mission statements, product portfolios, and business plans were obtained.

As a first step, three pilot case studies determined the general strategy for obtaining cooperation from the host organizations and the type of information desired. However, with qualitative procedures, the type of information obtained evolves as the study proceeds. When case study methodology is used, it is important that bias does not develop toward the criticality of information. Consequently, the frequency with which words, phrases, and trends were mentioned was recorded and their relative emphasis noted.[19]

The manner in which employees refer to other groups and functions within the organization is also important. Special attention was given to employees' stories and metaphors as these represent employees' perceptions and interpretations of their organization.

The case studies were continued until saturation developed. However, saturation was difficult in this study because of the complexity of the issues addressed. Each case seemed to develop new subtleties until after the 24th case, when it was concluded that the significance of additional insights did not justify additional time and expense.

Validity and reliability are difficult to measure precisely in qualitative research. Qualitative assessment is largely the product of the interaction of the researcher with the phenomenon. Both validity and reliability lie in the qualification of the researcher.[20] The researchers on this project were qualified by virtue of having conducted several funded research projects, published a number of articles, and made academic presentations on this methodology.

Research Sample

The goal when using the case study method is to obtain cooperative participants that will allow access to extensive, relevant information. For this study, opportunistic sampling was used to gain access to cooperative organizations.[21] Although random selection was not feasible, several criteria guided selection of participants. First, the company had to exceed $250 million in annual revenues. It was believed that a smaller company might be inordinately influenced by one factor. Second, the company could not have been acquired within the past four years, nor could it have acquired a similar-sized entity. Third, the company had to be willing to allow access to employees at various organizational levels. Fourth, the purchasing executives had to be willing to provide the names of individuals who might not be "friends" of the purchasing function so that differing perspectives could be compared. Fifth, the initial contact and all subsequent contacts within the companies were told that all information would remain confidential. However, the company had to be willing to disclose any information the researcher considered pertinent to the study.

In case study research, it is essential to obtain information from a wide array of companies and make inferences from these data points. As an initial step in the sample selection, it was necessary to identify those organizations in which the purchasing function could be considered influential in the corporate strategic planning process. To identify these companies, an inquiry was sent to participants of the Center for Advanced Purchasing Studies (CAPS) 1996 North American Executive Purchasing Roundtable. Because of the financial commitment required to attend the Roundtable, the assumption was that the more progressive U.S. companies would attend. In turn, it was assumed that these individuals were likely to be knowledgeable about other progressive purchasing organizations.

Sixty-six letters were sent to Roundtable participants and 22 responses were received. In these 22 responses, 14 companies were identified more than twice. Identification of a company as progressive by more than two respondents served as a criterion to select organizations for the study. In addition, the participants of a small-group discussion at an annual North American Roundtable were asked to identify companies that were most involved in corporate strategic planning. These two sources served to identify highly progressive organizations.

Other sources were drawn on the basis of industrial representation. The ideal was to have at least two representatives from major industries so comparisons could be make within an industry. The first 24 case studies were drawn from these industries as shown in Table I.

Emergence of Risk Management

In a case study, much of the information develops a holistic picture so it is difficult to separate variables. The research reported here is part of a larger research project analyzing the integration of corporate and purchasing strategy. However, between the ninth and twelfth interview, the importance of risk management in purchasing became obvious. Accordingly, risk management became a focus with the larger study.

TABLE I

INDUSTRY REPRESENTATION

Financial Services	2	Consumer Products	3
Mining	2	Telecommunications	3
Engineering	1	Health Care	3
Financial Services	3	Electroinc Manufacturing	2
High Technology Manufacturing	2	Consumer Product Packaging	1
Hospitality	2		

The importance of risk management was revealed by a number of comments from purchasing strategy discussions. For instance, one purchasing vice-president stated, "Five years ago we (purchasing) could make few mistakes. But today, we have to be aware of the potential downside of our initiatives." Another vice-president, whose operation was taking on extensive outsourcing, said, "Part of our analysis must include the potential danger associated with outsourcing." In still another company, the chief purchasing officer had recently made a presentation to the executive committee. One of the slides included the title, "Optimizing Opportunities While Minimizing Errors." When discussing the presentation, risk management was mentioned several times.

Probably one of the most revealing discussions occurred when a purchasing director described purchasing's initiative with quality. He made it clear that purchasing convinced the CEO that product quality would be dramatically improved if a manager of purchasing quality was hired. The company had previously been reluctant to use outside expertise and the CEO believed that purchasing would be putting the company at risk by involving suppliers early in a product re-design initiative. However, the CEO agreed to hire a purchasing manager responsible for quality, who was tasked with managing early supplier involvement in new product design.

THE ROLE OF RISK MANAGEMENT

As the concept of risk emerged during the case studies, it was necessary to develop a clear understanding of risk. According to the research literature, decisions are defined as having higher risk to the extent that (a) their expected outcomes are more uncertain, (b) decision goals are more difficult to achieve, or (c) the potential outcomes set includes some extreme consequences.[22]

To better understand risk in the context of supply management, two theoretical perspectives are discussed: resource dependency theory and transaction cost theory. First, the risks inherent in two types of purchasing situations are examined. To demonstrate the first situation, the typical administrative support cycle for purchasing is shown in Figure 1. Many tasks associated with this cycle are viewed as routine or clerical.

In this figure, assume that production tells the purchasing group about production material needs, specifications, and desired timetables. Purchasing, acting in a reactive manner, then prepares requests for quotes and selects a supplier. A purchase order is issued, materials received, and the invoice paid. Purchasing is responsible for relatively routine procedures, but several risks and potential consequences still exist that can damage the firm's ability to satisfy the internal customer. Some of these risks and consequences are illustrated in Table II (see page 42). The major risks for the purchasing function are those of clerical errors and poor judgement in supplier selection. Poor judgement in supplier selection can lead to late deliveries and missed shipments, but the requisitioning department bears responsibility for quality, timing, and specifications; so purchasing's responsibility for strategic decisions is not high.

Now consider a situation where purchasing is an integral member of a new product team. Figure 2 (see page 43) helps demonstrate this process. Purchasing is responsible for materials availability and cost in the new product so it works closely

FIGURE 1

THE ADMINISTRATIVE SUPPORT CYCLE FOR PURCHASING ACTIVITIES

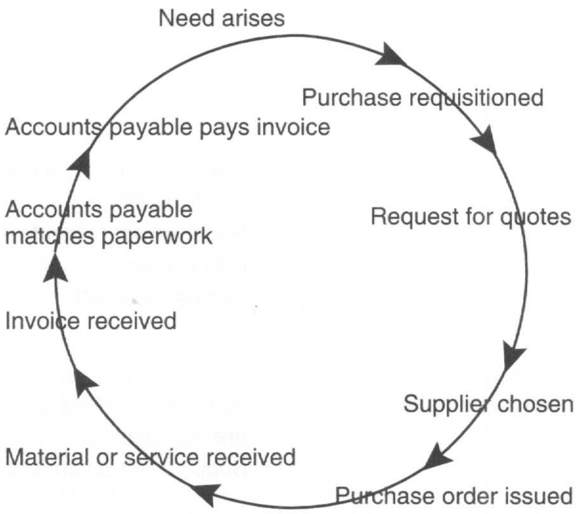


TABLE II

RISKS AND CONSEQUENCE ASSOCIATED WITH THE CYCLE OF ADMINISTRATIVE SUPPORT ACTIVITIES IN PURCHASING

Activity	Administrative Action	Risks or Consequences
Need recognition	Need is recognized too early.	Need may not be well understood. Appropriate material or technology is not available to fulfill need.
	Need is recognized too late.	Market is missed entirely or market share is lost. Profitability is affected
Purchase requisition	Not enough will be requested. Too much will be requested.	Production will be delayed. Orders will not be filled on time. Carrying cost and cost of obsolescence will be incurred.
Request for quotations	Requirements over-specified.	Possible improvements to process or product overlooked.
	Requirements not well specified.	RFQ respondents are misled.
	Too many quotes will be received.	Not enough time for proper analysis.
	Too few quotes will be received.	Best supplier may not reply.
Supplier chosen	Supplier will not be capable of meeting requirements for quantity, quality and delivery. Supplier uses knowledge of your product to become your competitor.	Production delays. Poor quality products. Unfilled orders. Lost customers. Loss of market share.
Purchase order issued	Negotiated terms may not be favorable. Clerical errors may result.	Delivery mode may be inappropriate. Payment terms may be non-motivating to supplier.
	Supplier does not commit enough capacity to the order. Supplier is not capable of performing the statement of work. Supplier accepts order but gives other contracts priority.	Some portion of the order is wrong. Wrong quantity, items, price, delivery terms. Supplier cannot deliver on a timely basis. Poor quality goods or services are received. Inadequate supply is produced.
Invoice/Order received	Order incorrect, incomplete, or late.	Production delays. Backorders or rework must be completed. More supplier cost incurred. Time devoted to resolution of error or to expediting the order. Items must be returned. Supplier may incur delivery penalties.
	Receiver report not completed on timely basis. Receiver not properly matched with invoice. Invoice incorrect.	Supplier not paid on timely basis. Errors may occur in the report. Delays in payment to supplier. Supplier time devoted to resolution. Time devoted to resolution. Incorrect amount may be paid. Damage to supplier/buyer relationships.
Payment made	Items and service will be paid for that are not received. Supplier will be underpaid.	Higher costs, lower profits. Supplier does not desire future business from buyer.

with potential suppliers during the early developmental stage. Subsequently, purchasing works with a selected supplier to develop a long-term alliance in which material development risk will be shared. Concurrently, a make-buy analysis may conclude that another component of the new product should be totally outsourced. Purchasing is responsible for both the analysis and the management of the outsourcing effort. Throughout this process, changes are being made as the product is tested and revised. In this case, purchasing is responsible for non-routine activity and thus incurs higher risk than when it had less strategic involvement. The consequences of poor judgement, poor timing, and poor quality can be laid squarely at purchasing's door. However, for the organization as a whole, risk is now shared with the supplier.

A review of transaction cost theory and the resource dependency model helps explain why many purchasing functions are not proactive.

Transaction Cost Theory

This theory views negotiating, monitoring and enforcing contracts as transactions, all of which have associated costs. By reducing the number of transactions, management can reduce the associated costs.[23]

In addition to transaction costs, each transaction also incurs an associated risk of opportunism. Opportunism is defined as "self-interest seeking with guile." This includes, but is not limited to, lying, stealing, and cheating. More commonly, opportunism is the incomplete or distorted disclosure of information in a transaction, especially in calculated efforts to mislead, distort, disguise, obfuscate, or otherwise confuse.[24] All transactions carry the risk of supplier opportunism. Again, by reducing the number of transactions, the risk of opportunism can be reduced.

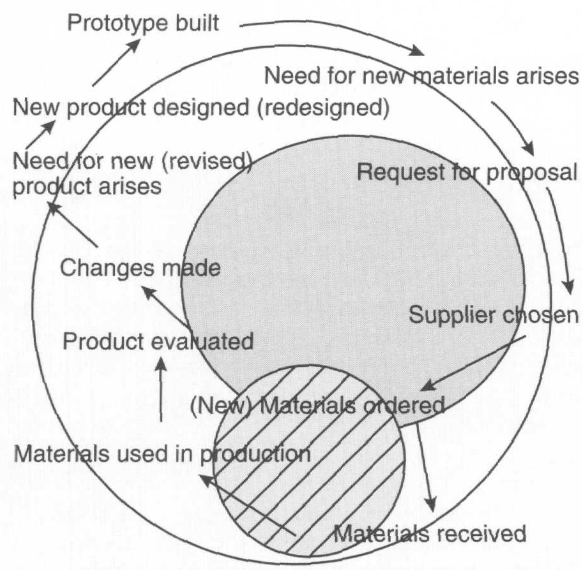
The definition of risk also states that with risky decisions, goals are more difficult to achieve. When transactions can be minimized or routinized, goals are easier to achieve. Thus, there is an incentive for purchasing to remain with administrative activities that avoid risk for its own department. Or in terms of proactive purchasing management, transaction theory explains why purchasing would attempt to avoid proactive endeavors.

Resource Dependency Theory

This theory also helps with understanding why purchasing management may wish to avoid high risk proactive activities. Resource dependency theory attempts to explain how organizations adapt to their environment. In the most simplistic form, it states that for an organization to survive, it must not become dependent on other organizations.[25]

FIGURE 2

THE DESIGN/DEVELOPMENT CYCLE



Organization dependency is high risk because it leads to more uncertain outcomes. This implies that the more critical the resources to the organization, the more the organization wishes to control these resources and the less it wishes to have those resources controlled by other organizations.

Some proactive purchasing management practices may be considered contrary to resource dependency theory because they create greater risk. For example, when an organization reduces its supplier base, it relies on fewer suppliers for critical materials, possibly increasing the risk of an interruption of supply. Also, when major components or activities are outsourced to suppliers, dependency on those suppliers is increased, creating, it would seem, higher risk for purchasing and the entire organization.

In summary, dependency creates risks, making goals more difficult to achieve, and increasing the potential for extreme consequences.

CONDITIONS NECESSARY FOR PURCHASING TO MANAGE RISK

Thus far, based on transaction cost theory and resource dependency theory, a case could be made that proactive purchasing management creates higher risk for the purchasing function and the entire organization. However, our case studies provide evidence to the contrary. Proactive purchasing management is the management of risk — it actually mitigates risk and, at the same time, provides a higher return. An analogy to reducing risk and increasing returns can be made with increasing quality while at the same time increasing profits. Forward thinking firms are learning that risk reduction for the entire organization, through proactive purchasing, can increase returns.

Proactive purchasing management includes activities that are beyond the traditional administrative purchasing cycle. For example, reducing the supplier base, developing long-term alliances, achieving early supplier involvement, and outsourcing are activities that are beyond the traditional administrative purchasing activities diagramed in Figure 1.

The current purchasing trend is obvious. These trends have the potential to increase risk for the purchasing group and the organization. The brief review of transaction theory and resource dependency theory establish a perspective for this argument. These theoretical perspectives would tend to indicate that purchasing management has little incentive to be proactive. However, if purchasing manages these risks, the return to the entire organization will be greater. But if purchasing does not manage proactively and minimizes its risks by engaging only in traditional administrative activities, the overall return for the organization is likely to be diminished.

If purchasing manages organizational risk and increases organizational return, the function will be more valuable to the organization. As a result, the purchasing function should then have greater prestige and status within the organization.

The question arises as to how purchasing can pursue strategies that appear to create more risk, while at the same time, actually reduce the risk to the organization. An analysis of the cases reveals how this is accomplished.

At the group level, organizations that employed more qualified purchasing employees reduced risk because purchasing had the required competencies to manage the risk. Examples come from companies that had strong supplier certification programs. These companies were able to reduce the supplier base (a potentially risky endeavor) because the purchasing group knew how to develop quality certification programs and audit the suppliers to assure they met standards. These activities essentially reduced the risks of poor judgement in supplier selection.

Other examples that emerged in the case studies were from firms that had long-term alliances. A long-term alliance makes an organization dependent on one supplier, hence potentially increasing risk. However, with highly qualified purchasing managers working with the supplier to maintain and improve the desired technology and remain cost competitive, the risk is managed. The supplier also has an incentive to remain committed to the relationship. It is evident that the first condition necessary for purchasing to manage risk is the assignment of responsibility to competent employees.

At the organizational level, it was important that top management allow purchasing the freedom to pursue potentially risky endeavors. However, proactive strategies such as outsourcing and long-term alliances can greatly increase the risk for the whole organization, not just purchasing. Management must be willing to incur risks as purchasing becomes proactive. Thus, a second condition for purchasing to manage risk is the willingness of top management to bear the risk.

During the case studies, the nature of problems requiring risky endeavors illuminated some interesting relationships. If a problem was at the core of the business and the business was having financial hardships, the company was more tolerant of risk. This situation is supported by prospect theory.[26] This theory simply states that how a situation is framed will determine the level of risk pursued. A situation may be framed such that it is not seen as high risk because it is necessary to take that action to survive. This situation arose in seven cases involving companies in economically depressed industries. Alternatively, an action may not be seen as high risk because the employees are qualified to manage it effectively. This situation was present in 12 of the cases.

The most important conclusion from the cases is that proactive purchasing can manage risk with highly competent purchasing professionals. These employees manage proactively by pursuing such activities as supplier certification programs, development of target costing with partners, outsourcing, and implementation of quality management programs. In addition they work to reduce routine administrative activities with such tactics as procurement cards and decentralization of routine tasks.

RESEARCH IMPLICATIONS

Several interesting research implications evolved from this study. First, the term *proactive purchasing management* is frequently used. A broader study could examine how and why purchasing managers use this term. Also, in these case studies the concept of integrating functions did not relate closely with risk, even though integration is recommended in the literature. It would be valuable to pursue the relationship between risk and integrating activities. Second, the concept of proactive management as it relates to risk management evolved during this study. Although it was not the focus of the research, the concepts could lead to a study investigating the conditions under which top management allows purchasing to manage risk.

MANAGERIAL IMPLICATION

Qualified, well-trained purchasing employees are able to manage proactively so that inherent risk is reduced and return improved. Proactive purchasing management is risk management. Those purchasing groups that do not manage risk will not add as much value to the organization, and, as a result, they will not have high levels of organizational prestige and credibility.

If upper management has not empowered the purchasing function with strategic involvement, directors of purchasing can still take steps to proactively manage risks in the administrative support cycle. Process improvements in the purchase requisition, RFQ, and supplier selection stages can pay noticeable dividends and attract credibility. If purchasing is able to manage risk well, its usefulness and prestige within the organization will increase, as will its involvement in strategic issues. Top management has the responsibility to involve purchasing at strategic levels and hire well-trained purchasing professionals to manage risk and increase returns.

REFERENCES

1. R.E. Spekman and R. Hill, "Strategy for Effective Procurement in the 1980s," *Journal of Purchasing and Materials Management*, vol. 16, no. 1 (1980), p. 3.
2. S. Rajagopoal and K.M. Bernard, "Strategic Procurement and Competitive Advantage," *International Journal of Purchasing and Materials Management*, vol. 29, no. 4 (1993), pp. 13-20.
3. M. Leenders and H. Fearon, *Purchasing and Materials Manaement*, (Burr Ridge: Irwin, 1993).
4. S. Heinritz, P. Farrell, L. Giunipero, and M. Kolchin, *Purchasing: Principles and Applications*, Eighth Ed. (Englewood Cliffs, New Jersey: Prentice-Hall, 1991).
5. D.W. Dobler and D.N. Burt, *Purchasing and Supply Management*, Sixth Ed. (New York: McGraw Hill).
6. D.N. Burt, *Proactive Procurement* (New York: Prentice-Hall, 1984).
7. Burt, op. cit., p. lx.
8. D.N. Burt and R.L. Pinkerton, *A Purchasing Manager's Guide to Strategic Proactive Procurement* (New York: AMACOM, 1996).
9. Burt and Pinkerton, op. cit., p. x1.
10. A.S. Carr, *Influencing Factors of Strategic Purchasing and its Impact on Buyer-Supplier Relationships*, Ph.D. Dissertation, Arizona State University, 1996.
11. Carr, op. cit., p. 132.
12. Carr, op. cit., p. 131.
13. M. Keough, "Buying Your Way to the Top," *Director* (April 1994), pp. 72-75.
14. V.T. Freeman and J.L. Cavinato, "Fitting Purchasing to the Strategic Firm: Frameworks, Processes, and Values," *Journal of Purchasing and Materials Management*, vol. 26, no. 1 (Winter) pp. 15-20.
15. D.S. Ammer, "Top Management's View of the Purchasing Function," *Journal of Purchasing and Materials Management*, vol. 25, no. 3 (1989), pp. 16-21.
16. E.G. Gula and Y.S. Lincoln, "Competing Paradigms in Qualitative Research" in *Handbook of Qualitative Research*, N.K. Denzin and Y.S. Lincoln (eds.), (Thousand Oaks, CA: SAGE, 1994), pp. 105-137.
17. D.C. Miller, *Handbook of Research Design and Social Measurement* (Newbury Park, CA: 1991, Fifth Ed.), p. 5.
18. B.M. Miles and A.M. Huberman, *Qualitative Data Analysis* (Beverly Hills, CA: SAGE, 1984).
19. J.P. Goetz and M.D. LeCompte, "Ethnographic Research and the Problem of Data Reductions," *Anthropology and Education Quarterly*, vol. 12 (1981), pp. 51-70.
20. N.G. Felding and J.L. Felding, Linking Data, (Beverly Hills, CA: SAGE, 1986).
21. R.G. Burges, *In the Field: An Introduction to Field Reasearch*, (London: George Allen & Unwin, 1990).
22. S. Stikin and A.L. Pablo, "Reconceptualizing the Determinants of Risk Behavior," *Academy of Management Review*, vol. 17, no. 1, pp. 9-38.
23. C.W.L. Hill, "Cooperation, Opportunism and the Invisible Hand: Implications for Transaction Cost Theory," *Academy of Management Review*, vol. 15, no. 3, (1990), pp. 500-513.
24. D.E. Williamson, *The Economic Institutions of Capitalism*, (New York: Free Press).
25. J. Pfeffer, and G.R. Salancik, *The External Control Of Organizations: A Resource Dependency Perspective*, (New York: Harper & Row, 1978).
26. D. Kahnerman and A. Tversky, "Prospect Theory: An Analysis of Decision Under Risk," *Econometrica*, vol. 47, pp. 263-291.