

**AN EXAMINATION OF THE RELATIONSHIPS AMONG LEADERSHIP
BEHAVIORS, KNOWLEDGE SHARING, AND ORGANIZATION'S MARKETING
EFFECTIVENESS IN PROFESSIONAL SERVICE FIRMS THAT HAVE BEEN
ENGAGED IN STRATEGIC ALLIANCES**

By

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A DISSERTATION

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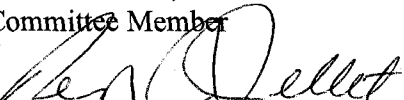
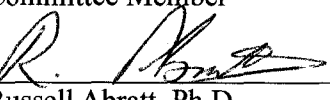
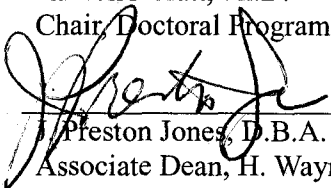
An Examination of the Relationships among Leadership Behaviors, Knowledge
Sharing, and Organization's Marketing Effectiveness In Professional Service Firms
That Have Been Engaged In Strategic Alliances

By

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therefore approved as the fulfillment of the Dissertation requirements for the Degree
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ABSTRACT

An Examination of the Relationships among Leadership Behaviors, Knowledge Sharing, and Organization's Marketing Effectiveness In Professional Service Firms That Have Been Engaged In Strategic Alliances

By

Li-Yueh Chen

Leadership behaviors, knowledge management, and strategic alliances are considered major business topics today. They are considered to be the important factors for business survival in this global competitive market environment. Research related to these topics can be found in professional journals, such as *Strategic Management Journal*, *Harvard Business Review*, *Organizational Science*, *Journal of Management*, *Journal of Marketing*, and *Academy of Management Journal* from the past 20 years to the present. There has been no previous direct empirical evidence to examine the relationships among leaders' transformational and transactional leadership behaviors, knowledge sharing, and organization's marketing effectiveness in the strategic alliance settings. To fill this research gap, this study focused on examining this relationship with an additional emphasis on professional service firms that have been engaged in strategic alliances.

Using a sample of 165 knowledge workers from 41 large-size accounting firms' offices in both Taiwan and the United States, a construct of knowledge sharing with four dimensions was developed for the study. The four dimensions are: (1) the strategies of internal organization knowledge sharing, (2) external organization knowledge sharing with strategic alliance organizations, (3) techniques for supplementing internal organization knowledge sharing, and (4) external organization knowledge sharing with customers. The significant findings of this study are: (1) transformational leadership and contingent reward leadership behaviors were positively related to knowledge sharing in the strategic alliance setting, (2) knowledge sharing, except external organization knowledge sharing with strategic alliance organizations was positively related to the organization's marketing effectiveness in the strategic alliance setting, (3) knowledge sharing partially mediated the contributions of transformational, contingent reward, and laissez-faire leadership behaviors to the organization's marketing effectiveness in the strategic alliance setting. Finally, this study discusses implications of these research results for academic researchers and practitioners. Limitations of this study and recommendations for future research are also provided.

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DEDICATION

This dissertation is dedicated to:

My Dad, Chialung, my Mom, Hsumei, my wife, Tsenfei, my sister, Yufen, my son,
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CHAPTER I

INTRODUCTION

Overview

Strategic alliances, knowledge management, and leadership are considered major business topics today. Research related to these topics can be found in professional journals, such as *Strategic Management Journal*, *Harvard Business Review*, *Organizational Science*, *Journal of Management*, *Journal of Marketing*, and *Academy of Management Journal* from the past 20 years to the present. Peter Drucker (1995) has suggested that the greatest change in the way business is being conducted is in the accelerating growth of relationships based not on ownership but on partnership. Thus, the concept of strategic alliance and the building of relationships is becoming more important to businesses.

Gulati (1998) has defined strategic alliance as “Voluntary arrangements between firms involving exchange, sharing, or codevelopment of products, technologies, or services. They can occur as the result of a wide range of motives and goals, take a variety of forms, and occur across vertical and horizontal boundaries” (p.293). Indeed, an emerging management view is that firms no longer can develop, manufacture, and market products on their own; alliances are thus seen as a means to gain access to

complementary resources and capabilities firms need (Parise & Henderson, 2001).

Many firms have adopted strategic alliances to build competency in order to achieve high market power and profit (Morrison, 1994; Achrol, 1997). Three examples of firms achieving success with strategic alliances are outlined below.

- (1) Burger King and AOL Time Warner Inc. formed a strategic alliance, in which customers may pick up American Online software at more than 11,370 Burger King restaurants world-wide. They also can receive digital codes with the purchases of Burger King products that allow them access to special websites with American Online promotions (AOL Time Warner Inc. unites with Burger King for marketing campaign, 2001).
- (2) Amazon.com features Circuit City products on its website. Customers have the option of having the merchandise shipped to them, or seeing if a product is available at a nearby Circuit City store for pickup (Gilligan, 2001).
- (3) Delta Airlines signed a marketing alliance with Northwest Airlines and Continental Airlines to provide customers with a wider range of destinations. This alliance includes code-sharing, reciprocal frequent flyer deals, reciprocal use of airport lounge programs, convenient schedule connections, and coordination of airport facilities (Three US airlines plan marketing alliance, 2002).

According to Drucker (1992), land, labor, and capital – the classical factors of production – have become secondary to knowledge as the primary resource for the economy. Additionally, Drucker et al. (1997) have pointed out that the “spirit of people at all levels of an organization to continually build and share knowledge” is a top priority for firms wishing to succeed in today’s competitive environment (p. 5). Therefore, many firms are coming to recognize that knowledge is a critical factor affecting an organization’s ability to remain competitive in the new global marketplace. Accordingly, their expenditures on knowledge management are due to rise to over 6% of revenues over the next few years (Murray & Myers, 1997).

Recognizing that the customer is the core of marketing management, customer knowledge management is receiving increased attention by researchers (Davenport & Prusak, 1998; Davenport, 1998; Bulter, 2000; Davenport, Harris, & Kohli, 2001; Gareia-Murillo & Annabi, 2002; Gibbert, Leibold, & Probst, 2002). Such researchers are interested in managing knowledge, as well as customer characteristics and preferences (Gibbert, Leibold, & Probst, 2002). According to Gareia-Murillo & Annabi (2002), “the knowledge that the customer has about the issues that are related to the product or services that he is interested in buying, and the knowledge that the firm should have, can be used to assist the customer in making a purchase decision” (p. 876).

Koeing and Srikantaiah (2000) add that having good processes and systems to manage customer knowledge are important because they provide the following benefits:

- (1) better and more timely design of new products and services,
- (2) early warning and competitive intelligence,
- (3) customer commitment and loyalty,
- (4) the synergy of collaboration.

Strategic Alliances, Knowledge Management, and Leadership

Recent studies have discussed alliances as an important means of sharing, acquiring, and/or transferring knowledge among firms in today's increasingly challenging and difficult competitive environment (Inkpen, 1998; Inkpen & Dinur, 1998; Stuart, 2000; Ireland, Hitt, & Vaidynath, 2002; Mowery, Oxley, & Silverman, 1996; Phan & Peridis, 2000; Larsson, Bengtsson, Henriksson, & Sparks, 1998; Dyer & Nobeoka, 2000; Lam, 1997; Simonin, 1999). Traditionally, alliances have emphasized "access to markets for products and services, or the supply of downstream production and delivery systems" (McNamara, 1998, p. 99). McNamara proposed the newer concept of the knowledge-based alliance. McNamara (1998) defines the knowledge-based alliance as "an inter-organizational relationship short of full integration of direction and routines in which final products are not traded, but the organizations combine and share knowledge

bases and trade intellectual property rights” (p. 102).

Leadership has been considered an important factor in the success of knowledge-based alliances. For example, Hefner (1994) has noted:

Strategic alliances require a unique style of leadership. Leaders set the benchmarks for organizational performance. Leaders creating strategic alliances must have a vision of the benefits to be gained in cooperative ventures and help their organizations overcome inhibitions about risk taking and resource sharing (p. 14).

Knowledge Management and Leadership

From a knowledge perspective, true leadership hinges on an ability to grasp the value-creating potential of the organization’s knowledge base. The leader must not only set strategy but also communicate it in a compelling fashion (Bukowitz & Williams, 1999). Additionally, Bollinger and Smith (2001) have pointed out that leadership should focus on establishing a culture that respects knowledge, reinforces its sharing, retains its people, and builds loyalty to the organization. Therefore, Bailey and Clarke (2000) have defined knowledge management as “how managers can generate, communicate and exploit knowledge for organizational benefit. Organizational benefit means “improving the effectiveness of organization strategy, operational

processes, and change management; thus, ensuring that the knowledge management focus is current” (p. 237).

In today’s business world, firms that can effectively leverage knowledge will be more effective than those that merely consolidate land, labor and capital (Harari, 1994). Customer value creation has been considered the major objective of knowledge management (Bukowitz & Williams, 1999). According to Zeleny (1989), customers are the possessors of knowledge. They are the only valid source and purpose of business because of their needs and desires. In today’s economy, knowledge use and understanding of customer value form the basis of value creation for the firm (Kim & Mauborgne, 1999). It has been suggested that building knowledge bases to serve customers and synthesize skills of network partners is often a leverage point for the alliance of firms (McKenna, 1991). Hence, a link between knowledge and marketing is emerging.

Knowledge Management and Marketing Concept

A knowledge-based marketing concept that integrates both knowledge and marketing concepts has been proposed by Brannback (1997). Brannback (1997) defines knowledge as “purposeful co-ordination of action” (p. 296). Since 1967, Kotler has presented the marketing concept of a customer-oriented focus. The purpose of the

marketing concept is to profitably satisfy customer needs through integrated marketing activities (Kotler, 1976). However, Brannback has found that integrated marketing requires the co-ordination of action of other functional departments in an organization. In the present context, this involves knowledge sharing activities. Lee (2001) has defined knowledge sharing as “activities of transferring or disseminating knowledge from one person, group, or organization to another” (p.324).

The ultimate purpose of the marketing concept is to ensure that achieving organizational goals depends on determining the needs and wants of target segments and delivering the desired satisfactions more effectively and efficiently than competitors (Kotler, 1997). Hence, the concept of marketing effectiveness (Kotler, 1977) would be useful in measuring the practice of knowledge-based marketing. The concept of organizational marketing effectiveness that derives from the marketing concept proposed by Kotler (1977) has focused on how management views and manages the customer philosophy, integrated marketing organization, adequate marketing information, strategic orientation, and operational efficiency.

This dissertation has introduced the relationships among strategic alliance, knowledge sharing, leadership, and organizational marketing effectiveness. Leadership has been suggested as an important determinant of knowledge sharing and alliance

building. Additionally, an alliance has been viewed as a *mechanism* to share, acquire, or transfer the knowledge across firms. Given that the major objective of knowledge management is customer value creation, how the organization effectively shares the knowledge in the alliance setting, in order to profitably satisfy customer needs and wants, has to be measured. Therefore, this dissertation will examine how leadership behaviors affect knowledge sharing, which in turn impacts the marketing effectiveness of the organization. A strategic alliance setting will provide the context for this research.

Background of Problem

The number of strategic alliances has almost doubled since 1985 and is expected to increase even more in the future (Booz, Allen & Hamilton, 1997). To date, there are over 20,000 organizational alliances worldwide that have been formed from 1997 to 1999 (Farris, 1999). Additionally, a recent study states that more than 80% of top-level managers believe that strategic alliances will be a prime vehicle for future growth (Schifrin, 2001). Another study pointed out that companies expect that, as of 2003, 35% of companies' revenues will come from alliances, up from 21% in 1998. Unfortunately, the failure rate of strategic alliances has now reached a high of 70% (Kalmbach & Roussel, 1999).

The business environment today is challenging and changing rapidly, so much so

that effective leadership is not optional if survival and growth are the aim of the organization. Improving leadership should start at the board and executive level (McConnell, 1994). Segil (1998), co-founder of The Lared Group, a Los Angeles alliance management consulting firm, pointed out that once an alliance becomes an integral part of an organization's strategy, the involvement of the company's CEO and board of directors becomes critical to the alliance's success. Additionally, Ellis (1996) asserted that, to make a strategic alliance succeed, the manager must be able to create an environment of trust, maintain broad strategic vision, and feel genuine empathy for others, even those who are still competitors in other areas.

The busiest U.S. business sector is no longer the manufacturing industry, but rather the service sector. Examples of the service sector are educational institutes, health care groups, media companies, and accountancy, financial, consultancy and legal services. In 1999 service represented 78% of gross domestic product (GDP) and 80% of employment (Zeithaml & Bitner, 2003). Recent MBA placement statistics for seven major business schools show that 34% of graduates joined manufacturing companies; 28% joined financial-service firms; 11% went into consulting; and 22% went to work for other service employers (Lovelock, 1988). The buzzwords in the service sector are high speed, tech, flex, and touch; the service is fast knowledge-intensive, made-to-measure,

and based on personal contact. Based upon these characteristics, the need for knowledge workers is clear. Managing knowledge workers effectively, however, is a big challenge (Drucker, 2002, p. 12). Knowledge workers are not objects to be manipulated. They are doing things that are not necessarily observable, and do not follow a set of predictable rules (Knowledge workers, 2000, p. 15).

Problems, nevertheless, will occur when sharing knowledge within or between organizations. Professional knowledge is perceived as a source of power. People tend to have feelings of “ownership” and hoard knowledge (Cole-Gomolski, 1997). Additionally, competition among professionals to gain knowledge can be intense. Many professionals have little respect for others outside their field. Professionals who do not develop and share their knowledge rest on their laurels. Thus, knowledge is volatile and vulnerable to loss (Jordan & Jones, 1997; Vermaak & Weggeman, 1999). Furthermore, only 11% of information technology (IT) managers say it is easy, or somewhat easy, to change their companies’ culture to encourage knowledge sharing and collaboration, according to a survey conducted by *Information Week* (Eckhouse, 1999).

Although the importance of customer knowledge has been recognized by some researchers recently, firms’ managers still pay little attention to this field. A study by Davenport (1998), sponsored by the Concours Group and the American Productivity and

Quality Center has indicated that “the state of the art in the field of customer knowledge is fairly artless. Certainly, some companies are doing impressive things with customer data. A few even manage to turn some of it into knowledge” (p. 32). Additionally, Davenport (1998) pointed out that the difficulty in managing customer knowledge is that it is “widely dispersed around a company” (p. 32). Thus, the issue of sharing customer knowledge within and between organizations has been identified. Furthermore, Butler (2000) pointed out that “customers invariably know more about the organizations they do business with than the business knows about its customers. Whilst all businesses recognize that they are nothing without their customers, they rarely fully capitalize on the customer knowledge that their employees informally collect” (Butler, 2000, p. 34).

The American Productivity and Quality Center has identified core cultural values, integration, role of leadership, human network, and rewards and recognition as factors impacting knowledge sharing (Comeau-Kirschner, 2000). It is important for leaders to develop a knowledge-sharing culture wherein “people would share ideas and insights because they see it as natural, rather than something they are forced to do. They would expect it of each other and assume that sharing ideas is the right thing to do” (McDermott & O’Dell, 2001, p. 77). Additionally, Drucker (2002) has pointed out that the only way to achieve leadership in the knowledge-based business is “to spend time with the

promising knowledge professionals: to get to know them and to be known by them; to mentor them and to listen to them; to challenge them and to encourage them” (p. 12).

Thus, the question arises as to the type of leadership behavior needed to meet this requirement.

Furthermore, a survey conducted by Ipsos-Reid and Microsoft Canada Company has found that a majority of Canadian business leaders indicate that knowledge management practices have created value by improving organizational effectiveness, delivering customer value, and improving product innovation and delivery (Doucet, 2001). As the importance of organizational marketing effectiveness has been recognized, this study will examine whether or not the sharing of knowledge will affect the marketing effectiveness of organizations.

Importance of the Topic

Given the importance of knowledge sharing and strategic alliances discussed previously, as well as the direct impact of effective leadership on them, this study will examine the relationships between these organizational factors. The study will also examine how these factors affect organizational marketing effectiveness.

More specifically, two types of leadership behaviors will be addressed in this study. These are transformational and transactional leadership behaviors, which have been

studied since the 1980's and recently have become part of "the New Leadership" paradigm (Bryman, 1992). According to Bass (1985), transformational and transactional leadership are distinct but not mutually exclusive processes. Generally, transformational leadership is defined in terms of the leader's effect on followers; employees feel trust, admiration, loyalty, and respect toward the leader, and are motivated to do more than they originally expected to do (Yukl, 1998).

Transactional leadership, on the other hand, focuses on the exchanges that occur between leaders and their followers. Transactional leadership involves values, but they are values relevant to the exchange process, such as honesty, fairness, responsibility, and reciprocity (Yukl, 1998). Research findings have confirmed that transformational leadership behaviors are more highly related to organizational commitment, job satisfaction, job performance, and effectiveness than transactional leadership behaviors (Bass, Avolio, & Goodheim, 1987; Yammarino & Bass, 1990; Chen, 2001; 2002).

As Webster (1995) has refined the framework of organizational marketing effectiveness, which was originally developed by Kotler (1977) and is considered ideal for service firms, this study will adopt this framework. The framework consists of four dimensions: (1) operational efficiency, (2) customer philosophy, (3) adequate marketing information, and (4) strategic orientation. Operational efficiency refers to the internal

marketing process that consists of internal communication, internal coordination, and internal implementation of marketing activities. Customer philosophy refers to an organization's external focus on customer needs and wants, and monitoring of customer satisfaction. Adequate marketing information comprises both internal and external issues and consists of estimates of sales potential and assessments of the cost effectiveness of various marketing expenditures. Strategic orientation focuses on the organization's long-term survival and also reflects a merger of internal and external issues (Webster, 1995; Leisen, Lilly & Winsor, 2002).

Framework for the Study

The setting of this study will be a specific type of professional service firm that has been engaged in a strategic alliance. While there are no widely accepted definitions of professional service, a number of common characteristics related to professional service appear in the literature (Maister, 1993; Lowendahl, 1997). Professional service firms include law firms, architectural firms, accounting firms, investment banks, advertising agencies, and marketing and public relations agencies (Weiss, 1999). Professional service firms are knowledge-intensive business services (Larsen, 2000). They share common features, including the generally intangible nature of their products, markets that are dominated by professional customers, and a large proportion of staff with university

degrees. The specific setting for this research study will be accounting firms.

Focus of the Study

Prior related research has studied: (1) the relationships between leadership behaviors and knowledge management (Politis, 2001; Ribiere & Sitar, 2003), (2) the knowledge-based approach in strategic alliance settings (Inkpen, 1996; 1998; Dyer & Nobeoka, 2000; Inkpen & Dinur, 1998; Lam, 1997; Mowery et al., 1996; Simonin, 1999; Parise & Henderson, 2001), and (3) the relationships between leadership behaviors and organizational effectiveness (Rodsuttl & Swierczek, 2002; Wang & Satow, 1994; Avery, 2001; Pounder, 2001). Almost non-existent is research on: (1) the relationship between leadership behavior, both transformational and transactional, and knowledge sharing; and (2) the relationship between knowledge sharing and organizational marketing effectiveness.

One study by Politis (2002) focused on the effect of transformational and transactional leadership on the process of knowledge acquisition of self-managed teams, and the consequences of this effect on organizational performance. This study, however, differs from Politis (2002) in that it concentrates on knowledge sharing and examines organizational marketing effectiveness in the strategic alliance setting.

The purpose of this dissertation will be threefold:

- (1) To examine the relationship between transformational and transactional leadership behaviors and the sharing of knowledge in the strategic alliance setting,
- (2) To examine the relationship between the sharing of knowledge and organizational marketing effectiveness in the strategic alliance setting, and
- (3) To examine the possible mediating role of knowledge sharing on the relationships of transformational and transactional leadership behaviors and organizational marketing effectiveness in the strategic alliance setting.

No studies, to date, examined the relationships among leadership behavior, knowledge sharing, and organizational marketing effectiveness in the strategic alliance setting. This dissertation, therefore, will be unique in that it will encompass all three areas.

Research Questions

The research questions for this dissertation are as follows: (1) How do the transformational and transactional leadership behaviors affect the sharing of knowledge in the strategic alliance setting? (2) How does knowledge sharing affect the organizational marketing effectiveness in the strategic alliance setting? and (3) How do the transformational and transactional leadership behaviors affect the sharing of knowledge and, in turn, the marketing effectiveness of organizations in the strategic

alliance setting?

Chapter Summary

In today's increasingly challenging and difficult competitive business environment, the importance of the relationships among leadership, knowledge sharing, and effectiveness in the strategic alliance setting has been briefly introduced. Additionally, the importance of customer knowledge has been briefly introduced. Furthermore, the concepts of knowledge-based alliances (McNamara, 1998) and knowledge-based marketing (Brannback, 1997) have been introduced. In the knowledge economy, professional service firms are classified as knowledge-intensive business services. Due to the characteristics of knowledge workers, problems have arisen in sharing knowledge within and between organizations.

Two types of leadership behaviors are addressed in this study: transformational and transactional leadership behaviors. Now is the time to study whether transformational and transactional leadership would support knowledge sharing in order to achieve marketing effectiveness in the strategic alliance setting. Accounting firms, who have been engaged in strategic alliances both in Taiwan and the United States, will be focus of this study. The literature review in the following Chapter II will support this research effort.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

In the first chapter, we briefly introduced leadership and knowledge management as the important factors for companies to effectively achieve success in today's complex business environment, especially in the strategic alliance setting. Here the concepts of knowledge-based alliances (McNamara, 1998), knowledge-based marketing (Brannback, 1997), and marketing effectiveness (Kolter, 1977; Webster, 1995) have been introduced. Additionally, the characteristics of transformational and transactional leadership behaviors have been introduced. Furthermore, the characteristics of knowledge worker and professional service firms have been briefly introduced. These concepts and characteristics are addressed here to build a relationship among leadership behavior, both transformational and transactional, knowledge sharing, and organizational marketing effectiveness in the strategic alliance setting for study.

Therefore, this dissertation will examine the following research questions: (1) How do the transformational and transactional leadership behaviors affect the sharing of knowledge in the strategic alliance setting? (2) How does knowledge sharing affect the organizational marketing effectiveness in the strategic alliance setting? and (3) How do

the transformational and transactional leadership behaviors affect the sharing of knowledge and, in turn, the marketing effectiveness of organizations in the strategic alliance setting? To accomplish the purpose of this study, accounting firms who have been engaged in a strategic alliance both in Taiwan and the United States, will be the focus of this study.

To answer these questions, a literature review of studies on this topic will be presented. Specially, this chapter will provide: (1) an historical overview of leadership definitions and theories, (2) a review of the literature on transformational and transactional leadership behaviors, (3) the definitions and the theory of knowledge management (knowledge sharing), (4) a review of literature on the marketing concept and marketing effectiveness, (5) an analysis of research on the relationship between knowledge management (knowledge sharing) and strategic alliances, (6) an analysis of research on the relationships among leadership, knowledge management (knowledge sharing), and organizational effectiveness (marketing effectiveness), and (7) an analysis of research on the relationship between knowledge management and organizational marketing effectiveness.

Historical Overview of Leadership Definitions and Theories

As organizations face challenges from internal and external environments,

academic researchers and practitioners are focusing more attention on the characteristics and behaviors of their leaders. How do we improve our competitiveness in the global marketplace? Kotney (1994) believes that the answer is leadership. Smith (1994) also espouses leadership as the critical factor associated with organizational performance. Kanter (1997) has pointed out that managers in today's organizations must be comfortable with change and provide a sense of clarity and direction. Top levels of the organization must think strategically to compete globally, continuously restructure the organization to meet organizational challenges, to accommodate demographic changes in the work force, meet customer demands, and embrace rapid technological changes (Hooijberg, Hunt, & Dodge, 1997; Gibler, Carter, & Goldsmith, 2000). Thus, the concept of strategic alliances has become a necessity for leaders to meet a wide range of challenges.

The Definitions and Theories of Leadership

In this section, a brief review of earlier research on the leadership process will be provided. Earlier leadership theorists have provided a solid foundation for the latest leadership approaches comprising transformational and transactional leadership behaviors. Transformational and transactional leadership behaviors will be provided in the next section of this chapter.

Volumes of literature exist on the topic of leadership; researchers have found that leadership behaviors are an important determinant to business success (Burke & Day, 1986; Bass, 1990; Ulrich, Zenger, & Smallwood, 1999). Rost (1991) has found that most leadership literature focused on leader ability, traits or behaviors. Additionally, Yukl (1998) has defined leadership in terms of traits, behavior, influences, role relationships, interaction patterns, and occupation of an administrative position. Definitions of leadership, which have been presented during the last 30 years and assumed appropriate for this study, are provided in the following table:

Table 1

The Definitions of Leadership		
Researchers	Year	Definition
Katz & Kahn	1978	Leadership is “the influential increment over and above mechanical compliance with the routine directives of the organization” (p. 528).
Rauch & Behling	1984	Leadership is “the process of influencing the activities of an organized group toward goal achievement” (p. 46).
Richards & Engle	1986	Leadership is about articulating visions, embodying values, and creating the environment within which things can be accomplished (p. 206).
Jacoba & Jaques	1990	Leadership is a “process of giving purpose to collective effort, and causing willing effort to be expended to achieve purpose” (p. 281)
Lohmann	1992	Leadership is “the formulation of a vision, developing a climate of trust within the organization, and empowering others” (p. 59)
Drath & Palus	1994	Leadership is the process of making sense of what people are doing together so that people will understand and commit (P. 4)
House & Aditya	1997	Leadership is articulating an organizational vision, introducing major organizational change, providing inspiration, and dealing with high profile aspects of the external environment.
Bass	1997 _a	Leadership is either a matter of reinforcement of followers by a transactional leader or the moving of followers beyond their self-interests for the good of the group, organization, or society by a transformational leader.

Leadership has been studied in different ways, depending upon the researchers' methodological preferences and definition of leadership. According to Yukl (1998), much of the leadership research covers leader traits, behavior, power, influence, and

situational approaches.

Trait Approach

Early leadership studies were primarily focused upon the traits of leaders. Hogan (1991, p. 875) defines traits as referring to “recurring regularities or trends in a person’s behavior”. House and Aditya (1997) describe this trait approach as “individual characteristics that differentiate leaders from non leaders” (p. 410). Yukl (1989) has pointed out that the focus of most trait research has been “managerial motivation and specific skills, whereas earlier research focused more on personality traits and general intelligence” (p. 260).

Major research efforts on leader traits are: (1) McClelland’s research on managerial motivation (McClelland, 1965; 1975; 1985; McClelland & Burnham, 1976; McClelland & Boyatzis, 1982); (2) Miner’s research on managerial motivation (Miner, 1978; 1985; & 1986); (3) Critical incident research on competencies (Boyatzis, 1982); and (4) Longitudinal research with assessment center (Bray, Compball, & Grant, 1974; Howard & Bray, 1988).

Behavior Approach

Behavioral theorists work towards developing a better understanding of what leaders actually do in their positions and how such behaviors relate to leader effectiveness.

Behavioral theories fall into two general categories (Yukl, 1998). One encompasses research on managerial work. Major research work in this area consists of: (1) Studies of job descriptions, which attempt to identify the behavioral requirements for effective performance of particular types of managerial jobs (Hemphill, 1959; Mahoney, Jerdee, & Carroll, 1965; Tornow & Pinto, 1976; Page & Tornow, 1987); (2) Studies of managerial roles. Mintzberg (1973) for example, developed a taxonomy of managerial roles by observing 10 roles which he said account for all of a manager's activities.

A second category of behavior theory compares the behavior of effective and ineffective leaders. Major work in this area includes the Ohio State leadership and Michigan leadership studies. The Ohio State studies defined two independent leader behavior dimensions: (1) consideration (the degree to which a leader acts in a friendly and supportive manner, shows concern and respect for subordinates, and looks out for their welfare) and (2) initiating structure (which is the leader's efforts to get resources organized and then get the work accomplished) (Fleishman, 1953; Halpin & Winer, 1957; Hemphill & Coons, 1957). The Michigan leadership studies focused on identifying the relationship among leader behavior, group processes, and measures of group performance (Likert, 1961; 1967).

Power-influence Approach

The power and influence approach explains leadership effectiveness in terms of the amount and type of power the leader possesses and how he or she exercises his/her power. Power is viewed as important not only for influencing subordinates, but also for influencing peers, superiors, and people outside the organization, such as clients and suppliers (Yukl, 1998).

The conceptualization of power sources that is widely accepted is the dichotomy between position power and personal power (Bass, 1960; Etzioni, 1961). Yukl and Falbe (1991) have found that these two types of power are relatively independent, and each includes several distinct but partially overlapping components.

Based upon previous research, Yukl and his colleagues identified nine proactive influence tactics, which are: rational persuasion, inspirational appeals, consultation, ingratiation, personal appeals, exchange, coalition tactics, legitimating tactics, and pressure (Yukl & Falbe, 1990; Yukl, Lepsinger & Lucia, 1992; Yukl & Tracey, 1992). These nine influence tactics are commonly used in proactive influence attempts to motivate someone to carry out a request, perform a task, or support a proposal.

Situation Approach

In discussing a situation approach, researchers often describe the contingency

theory of effective leadership behavior. The contingency theories focus on “the impact of contingency variables such as task structure, the characteristics of environment, or subordinate’s characteristics on leadership effectiveness” (Slack, 1997, p. 294). The major lines of research on this approach are: (1) path-goal theory (House, 1971; House & Mitchell, 1974), (2) situational leadership theory (Hersey & Blanchard, 1984), and (3) LPC contingency theory (Fiedler, 1964, 1967).

In summary, this section has briefly introduced the importance of leadership in the competitive global marketplace. Generally, leadership has been defined as building the vision, trust, value, commitment, and working environment, and influencing activity, to accomplish the organization’s goal. In the historical development of leadership theories, much of the leadership research covers leadership traits, behavior, power, influence, and situational approaches. However, academic researchers have attempted to streamline and integrate these approaches; many studies are focusing on identifying the characteristics and value of transformational and transactional leadership behaviors. The next section will focus on these efforts.

Transformational and Transactional Leadership

Earlier leadership theories have contributed to an understanding of leadership and laid the groundwork for the development of transformational and transactional leadership

theories. This section, which presents an overview of earlier research, is divided into three subsections: (1) transformational leadership behavior, (2) transactional leadership behavior, and (3) a comparison of transformational and transactional leadership behavior.

Transformational Leadership

According to Burns (1978), the leadership process can occur in one of two ways, either transformational or transactional. The transformational leadership concept was originally proposed by Burns (1978) from descriptive research on political leaders, and then expanded by Bass (1985; 1990). However, Bass (1985) was the first to apply transformational leadership theory to business organizations.

The theory of transformational leadership simultaneously involves leader traits, power, behavior, and situational variables (Yukl, 1989). Thus, transformational leadership theory is viewed as a hybrid approach as it gathers elements from these major approaches (Yukl & Van Fleet, 1992). Transformational leadership is defined in terms of the leader's effect on followers: followers feel trust, admiration, loyalty, and respect toward the leader, and they are motivated to do more than they originally expected to do (Yukl, 1998). Thus, transformational leaders "set more challenging expectations and typically achieve higher performances" (Bass & Avolio, 1994, p. 3). However, today's researchers have recognized the importance of transformational leadership. For

example, Cascio (1995) stated that “today’s networked, interdependent, culturally diverse organizations require transformational leadership” (p. 930). Additionally, Tichy and Devanna (1998) believed that the power of transformational leadership is the visualization of the organization.

Kuhnert and Lewis (1987) stated that transformational leadership “originates in the personal values and beliefs of leaders, not in an exchange of commodities between leaders and subordinates” (p. 649). Followers trust transformational leaders because such leaders always show concern for the organization and followers (Podsakoff, MacKenzie, Moorman, & Fetter, 1990). Such leaders encourage followers to seek new ways to approach their jobs resulting from inspirational motivation and intellectual stimulation (Bass, 1985). Thus, such leaders are able to generate greater creativity, productivity, and effort, exceeding expectations. The transformational leader “provides followers with a cause around which they can rally” (Bass, 1995, p. 467).

Transformational leaders change organizational culture and focus more on long-term rather than short-term goals (Avolio & Bass, 1988). They can transform the organization by defining the need for change, creating visions, and mobilizing commitment to these visions (Tichy & Devanna, 1990). Rolls (1995) suggested that transformational leaders build awareness and acceptance of goals and mission, motivate

support among organizational members for organizational goals, and influence others because they create organizational meaning. Additionally, Tichy and Devanna (1990) stated that transformational leaders seek support and resources for the personal and professional development of their employees. Transformational leaders encourage followers to participate in educational programs to promote and develop skills to achieve exceptional performance (Avolio, Waldman, & Einstein, 1999).

Bass (1998) has identified four components of transformational leadership, which are:

- (1) **Idealized Influence:** Leaders behave as role models for their followers; they become admired, respected, and trusted. The leader's behavior is consistent, rather than arbitrary, and the leader shares in any risks taken. The leader demonstrates high standards of ethical and moral conduct and avoids using power for personal gain (Bass & Avolio, 1994).
- (2) **Inspirational Motivation:** Transformational leaders are inspiring and motivating in the eyes of their subordinates by providing meaning and challenge to their followers' work. They are able to energize employees' responses (Yammarino, Spangler, & Bass, 1993; Bass & Avolio, 1994). Leaders are able to have followers involved in envisioning attractive futures with the company; they create clearly communicated

expectations that followers want to meet and also demonstrate commitment to goals and shared vision (Bass, 1998).

(3) **Intellectual Stimulation:** An intellectually stimulating leader arouses in subordinates an awareness of problems, recognition of their own beliefs and values, and an awareness of their own thoughts and imagination (Yammarino, Spangler, & Bass, 1993). They promote intelligence, rationality, and careful problem solving (Bass, 1990). The result is that followers are encouraged to try new approaches; their ideas are not criticized when they differ from the leader's ideas (Bass & Avolio, 1994).

(4) **Individualized Consideration:** The leader with individualized consideration will give personal attention, treat each employee individually, and coach and advise each employee (Bass, 1990). Such leaders provide continuous follow-up and feedback, and, perhaps more importantly, link an employee's current needs to the organization's mission, and elevate those needs when it is appropriate to do so (Bass, 1985, 1990; Bass & Avolio, 1989).

Transactional Leadership

Burns (1978) argued that transactional leadership involves an exchange between leader and follower. Further, Bass and Avolio (1994) point out the following.

Transactional leadership emphasizes the transaction or exchange that takes

place among leaders, colleagues, and followers. This exchange is based on the leader discussing with others what is required and specifying the conditions and rewards these others will receive if they fulfill those requirements (p. 3).

Howell and Avolio (1993) suggest that both leader and follower reach an agreement concerning what the follower will receive for achieving the negotiated level of performance.

Some studies have found transactional leadership to be more desirable than transformational leadership. For example, Dubinsky et al. (1995) found that the transactional leadership approach was preferable to a transformational leadership approach in enhancing salespeople's affective and behavioral responses. One reason suggested by Dubinsky et al. (1995) is that salespeople usually work alone. Thus, they are isolated from their managers' emotional and physical reactions.

Furthermore, some studies have found that contingent reward leadership is positively related to leadership effectiveness, organizational commitment, job satisfaction, job performance, and extra effort (Lowe et al., 1996; Walumbwa & Kuchinke, 1999; Chen, 2001, 2002). Tejada et al. (2001) suggest that this relationship may exist because "contingent reward lies at the interface between what individuals perceive as transformational and transactional leadership, or that transformational leaders effectively

and consistently employ contingent reward” (p. 49).

Bass (1998) summarizes several different types of behavior inherent in transactional leadership:

- (1) Contingent Reward: These rewards are for good effort, good performance, and to recognize accomplishments. Thus, the leader assigns or obtains agreement on what needs to be done and promises rewards or actually rewards others in exchange for satisfactorily carrying out the assignment.
- (2) Management by Exception: The corrective transaction may be active (MBE-A) or passive (MBE-P). In active MBE-A, this behavior involves monitoring subordinates and correcting action, when necessary, to ensure that the work is carried out effectively. In other words, leaders watch and search for deviations from rules and standards. Passive (MBE-P) involves intervening only if standards are not met. The leader uses contingent punishments and other corrective action to respond to obvious deviations from acceptable performance standards.
- (3) Laissez-Faire: This is the avoidance or absence of leadership. This behavior entails avoiding decision-making and abdicating responsibilities.

Comparison of Transformational and Transactional Leadership

Bass (1985) describes transformational and transactional leadership as distinct but

not mutually exclusive processes, and he recognizes that the same leader may use both types of leadership at different times in different situation. Academic researchers and practitioners have found that both transformational leadership and transactional leadership can positively impact the firm's internal and external environments. Transactional leaders attempt to satisfy the current needs of their followers by focusing attention on path-on-goal exchanges. This means the manager uses her or his multiple sources of power to reward and punishment, which enables the control of valued outcomes and influence over employee performance (French & Raven, 1959; Podsakoff & Schriesheim, 1985). Transformational leaders try to raise the needs of the followers and promote activities and behaviors that lead to performance over and above simple transactional exchanges (Hater & Bass, 1988). These activities include developing a vision and enabling employees to accept it, setting a good example of values and behaviors essential to fulfilling the vision, and having employees put the interests of the group or organization above their own self-interest (House, 1977; Kouzes & Posner, 1987). Furthermore, Sujjan, Weitz, and Kumar (1994) point out the following.

A transformational leader transmits a sense of mission, arouses new ways of thinking, and consequently stimulates learning experiences; this style is congruous with a work force eager to develop its capabilities. As such,

transformational leadership focuses on the mutual needs, aspirations, and values that produce positive organizational results, oftentimes leading to relationship commitment and performance over and above what is considered reachable via transactional leadership behaviors (p. 41).

Bass (1985) also assumed that transformational leaders resolve conflict at a societal level, are proactive, creative, thoughtful, introspective and socially bold, and have high levels of energy and quality of life paradigm, whereas transactional leaders are reactive, affiliated, and friendly, have high sociability, and maximize profits.

According to House (1977), transformational leaders have high performance expectations, and they convey these expectations to their subordinates. One of the characteristics of transformational leadership, which Bass mentions, is intellectual stimulation, where the leader stimulates employees to rethink the way they perform their duties (Bass, 1985). Based upon the prior research (Burns, 1978; Bass, 1985; Bennis & Nanus, 1985), Amstrong (2001) summarizes the characteristics of transformational leadership as follows: (1) emphasizes ethical behavior, (2) develops leadership among team members, (3) shares a vision and goals, (4) improves performance through charismatic leadership, (5) leads by example, and (6) uses encouragement and praise effectively. Numerous researchers have found that transformational leaders have more

satisfied subordinates than transactional leaders (Hater & Bass, 1988; Yammarino & Bass, 1988; Howell & Avolio, 1993; Avolio, Kahai, & Dodge, 2000; Avolio, Kahai, Dumdum & Sivasubramian, 2001; Walumbwa & Wu, 2001; Chen, 2001, 2002). It may be that transformational leader-employee interactions are more balanced because both manager and employee work jointly and effectively to achieve the organizational mission (Deluga, 1988).

In summary, this section has reviewed the theory of transformational and transactional leadership behaviors. Since the 1980's both transformational and transactional leadership have been studied, and recently they have become part of "the New Leadership" paradigm (Bryman, 1992). Transformational leadership theory has been considered a hybrid approach because it gathers elements from other approaches (Yukl & Van Fleet, 1992). In general, the concept of transformational leadership behavior builds trust, admiration, loyalty, and respect among followers. On the other hand, the concept of transactional leadership behavior focuses on the exchanges that occur between leaders and their followers. It involves values, but they are values relevant to the exchange process, such as honesty, fairness, responsibility, and reciprocity. Furthermore, the comparison of transformational and transactional leadership behaviors has been reviewed.

Both transformational and transactional leadership behaviors have been found to positively relate to organizational commitment, job satisfaction, and job performance. Therefore, this current study will contribute to the existing literature by examining the relationship between these two leadership behaviors and the sharing of knowledge. The next section will focus on the topic of knowledge management and sharing.

Knowledge Management and Knowledge Sharing

This dissertation explores the research question of how do the transformational and transactional leadership behaviors affect the sharing of knowledge. Understanding what is knowledge and knowledge sharing is a necessary prerequisite to address this question. Thus, a brief history of knowledge and the definition and theory of knowledge management and knowledge sharing will be provided in this section.

Brief History of Knowledge

Drucker (1993) utilized history to show that transformation of knowledge has experienced three phases: the industrial revolution, the productivity revolution, and the management revolution. According to Drucker (1993), knowledge in the phase of industrial revolution (from the middle of the eighteenth century to the middle of the nineteenth century) is “applied to tools, processes, and products”; knowledge in the phase of productivity revolution (from 1880 to the end of World War II) is “applied to human

work”; knowledge in the phase of management revolution (after World War II) is “being applied to knowledge itself” (p. 42). Drucker (1993) pointed out that “Knowledge is now fast becoming the sole factor of production, sidelining both capital and labor (p. 20). It may be premature (and certainly would be presumptuous) to call ours a “knowledge society.” Drucker (1993) described the knowledge society as follows.

The basic economic resource – “the means of production,” to use the economist’s term – is no longer capital, nor natural resources (the economist’s “land”), nor “labor.” *It is and will be knowledge* Value is now created by “productivity” and “innovation,” both applications of knowledge to work. The leading social groups of the knowledge society will be “knowledge workers” – knowledge executives who know how to allocate knowledge to productive use, just as the capitalists knew how to allocate capital to productive use; knowledge professionals; knowledge employees. Practically all these knowledge people will be employed in organizations knowledge workers own their knowledge and can take it with them wherever they go (p. 8).

The knowledge in production revolution and management revolution has been significantly developed by managerial researchers and practitioners. According to

Nonaka and Takeuchi (1995), management literature in the past century can be divided into two development lines. One is a scientific line from Taylor (1911) to Simon (1945) then to the contemporary scientific strategies (e.g. Porter, 1985; Wernerfelt, 1984). Another is a humanistic line from Mayo (1933) to Weick (1979) then to organizational culture (e.g. Schein, 1992; Pfeffer, 1981).

The concept of the resource-based view (Wernerfelt, 1984) is a contemporary scientific strategy that has become an important theory in the field of knowledge management. Srivastava, Fahey, and Christensen (2001) point out, “Resources that are valuable, rare, inimitable and nonsubstitutable make it possible for businesses to develop and maintain competitive advantage, to utilize these resources and competitive advantages for superior performance” (p. 778). Resource-based view has been developed as the knowledge-based view of the firm (e.g. Foss, 1996_a; Foss, 1996_b; Grant, 1996_a; Grant, 1996_b; 1997) and will be discussed later in this section.

On the other hand, the concept of organizational culture that has been classified in the humanistic line recently has been adopted to develop the knowledge sharing culture. Schein (1992) defined culture as follows:

A pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well

enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems (p. 12).

Culture will be discussed in the section describing the relationship between leadership behavior and knowledge management of this Chapter.

For the definition of knowledge, Drucker (1993) proposed the Eastern and Western ancients' views. In the Eastern side, there are two theories of knowledge. One is Confucian. It holds knowledge as "knowing what to say and how to say it as the route to advancement and earthly success" (p. 27). Another theory is that of Taoist and Zen monks. They hold knowledge as "self-knowledge, and the road to enlightenment and wisdom". The theory of knowledge also occurred in the Western side during the same period (around 420 B.C.). Socrates suggests that "the sole function of knowledge is self-knowledge: the intellectual, moral, and spiritual; growth of the person" (p. 26).

The Definition and Theory of Knowledge Management

The theory of knowledge has progressed and been transformed from the industrial revolution to the 21st century. Today, knowledge has been recognized as a critical factor affecting an organization's ability to remain competitive in the new global marketplace; the importance of organizational knowledge has been discussed in recent strategic studies (e.g. *Strategic Management Journal*, Winter, 1996 Special Issue). Thus, Quinn (1992)

pointed out that the value of most products and services depends primarily on how “knowledge-based intangibles” – like technological know-how, product design, marketing presentation, understanding of the customer, personal creativity, and innovation – can be developed.

It is important to distinguish knowledge as distinct from data or information. Nonaka (1994) pointed out that “information is a flow of messages, while knowledge is created and organized by the very flow of information, anchored on the commitment and beliefs of its holder. This understanding emphasizes an essential aspect of knowledge that relates to human action” (p. 15). Furthermore, Davenport and Prusak (1998) provided the following definition, which helps us understand where to find knowledge.

Knowledge is a fluid mix of framed experience, values, contextual information and expert insight that provides a framework for evaluation and incorporating new experiences and information. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices and norms (p. 5).

Polanyi (1966) classified human knowledge into two categories: explicit and tacit. Explicit refers to knowledge that is transmittable in formal, systematic language. On the other hand, tacit knowledge has a personal quality, which makes it hard to formalize and

communicate. Furthermore, Nonaka (1991, 1994) has pointed out that these two types of knowledge will reside in any organization. Explicit knowledge is knowledge that can be codified. As it is easily shared and communicated, most organizations have captured this knowledge in ordered repositories, systems, or operating technologies of the firm, thus making it available to all the members of the organizations. Tacit knowledge consists of mental models, beliefs and persuasions of each individual employee. It resides within the individual and is difficult to express in words.

Recently, Weiss (1999) has classified knowledge in professional service firms into two types of knowledge: rationalized knowledge and embedded knowledge. According to her definition, rationalized knowledge is “general, context-independent, standardized, widely applicable, public, official, and depersonalized” (p. 66). Embedded knowledge is “specific, context-dependent, unstandardized, narrowly applicable, private, personalized, unofficial, and may be personally or professionally sensitive” (p. 66). Thus, examples of rationalized knowledge would be methodologies for conducting projects, standard operating procedures, and legal references, etc. On the other hand, embedded knowledge is linked to its “original source”. Examples would be the successful experiences from knowledge workers, and context and explanation from colleagues that provide a more multidimensional picture for other knowledge workers.

Rationalized knowledge and embedded knowledge are similar to explicit knowledge and tacit knowledge respectively.

Defining knowledge management is difficult as academic researchers and practitioners in various fields tend to define the concept of knowledge based on their own particular fields and interests. For example, researchers with a management theory orientation address knowledge as processes based on individual and organizational competencies, such as know-how and skills. Management information system researchers and practitioners tend to define knowledge as an object that can be recognized and controlled in computer-based information systems. This dissertation will define knowledge using a management theory orientation. Bailey & Clarke's (2000) definition of knowledge management is the most appropriate definition to support the research objective of this study. The definitions of knowledge management assumed relevant for this study are provided in the following table.

Table 2

The Definitions of Knowledge Management

Researchers	Year	Definitions
Wigg	1999	The systematic, explicit, and deliberate building, renewal, and application of knowledge to maximize an enterprise's knowledge-related effectiveness and returns from its knowledge assets.
Skyrme	1997	The explicit and systematic management of vital knowledge and its associated processes of creating, gathering, organizing, diffusion, use and exploitation. It requires turning personal knowledge into corporate knowledge that can be widely shared throughout an organization and appropriately applied.
American Productivity & Quality Center	1999	A conscious strategy of getting the right knowledge to the right people at the right time, and helping people share and put information into action in ways that strive to improve organizational performance.
Bailey & Clarke	2000	Refers to "how managers can generate, communicate and exploit knowledge (usable ideas) for personal and organizational benefit". Here "Organization benefit" means "improving the effectiveness of organization strategy, operational processes, and change management, thus ensuring that the knowledge management focus is current" (p. 237).

Increasingly, the research on knowledge management has focused on the knowledge-based view of the firm (e.g. Foss, 1996_a; Foss, 1996_b; Grant, 1996_a; Grant, 1996_b; 1997; Nonaka, 1991). Gehani (2002) pointed out that the knowledge-based view of the firm is an outgrowth of the resource-based view (Wernefelt, 1984; Barney, 1991), whereby knowledge resources and capabilities of a firm are considered the most significant strategic resources. According to Grant (1997), "the foundations of the

knowledge-based view are a set of assumptions concerning the characteristics of knowledge and the circumstances of its creation and application". These include:

- (1) Knowledge as the overwhelmingly important productive resource in terms of its contribution to added value and its strategic significance.
- (2) Different types of knowledge varying in their transferability. The critical distinction is between explicit knowledge, which is capable of articulation and hence transferable at low cost, and tacit knowledge that is manifest only in its application and is not amenable to transfer.
- (3) Individuals as the primary agents of knowledge creation and, in the case of tacit knowledge, as the principal repositories of knowledge.
- (4) Most knowledge as subject to economies of scale and scope (p. 451).

Spender (1996) pointed out that it is because organizational knowledge is one of the resources of the firm that is difficult, if not impossible, for other firms to imitate it. Thus, Grant (1997) points out, "The firm is an institution which permits individuals to specialize in developing specialized expertise, while establishing mechanisms through which individuals coordinate to integrate their different knowledge bases in the transformation of inputs into outputs" (p. 451).

Additionally, Nonaka and Takeuchi (1995) pointed out that organizational

knowledge is viewed as the collective competencies and capabilities of an organization, something larger than the total of its individual skills and knowledge. Such collective competencies and capabilities are unique to the firm, and, thus, its competitive advantage is not replicable in the marketplace. In dynamic global markets of the 21st century, firms imperatively face the dual role of effectively applying their existing knowledge, both explicit and tacit, as well as regularly creating and sharing more appropriate newer knowledge (Spender, 1993; 1996). Therefore, knowledge management is the process of capturing the collective expertise and intelligence in an organization and using it to foster innovation through continued organizational learning (Nonaka, 1991; Quinn et al., 1996).

Customer Knowledge Management

The importance of customer knowledge management has been addressed recently by several researchers (e.g. Davenport & Prusak, 1998; Davenport, 1998; Bulter, 2000; Davenport, Harris & Kohli, 2001; Gareia-Murillo & Annabi, 2002; Gibbert, Leibold, & Probst, 2002). Customer knowledge management is about gaining, sharing, and expanding the knowledge residing in customers, to both customer and corporate benefit. It is also the strategic process by which cutting-edge companies transform their customers from passiveness as recipients of products and services, to empowerment as knowledge partners (Gibbert, Leibold & Probst, 2002).

Lesser, Mundel, and Wiecha (2000) have summarized the benefits of customer knowledge as follows:

- (1) Customer knowledge provides guidance and direction to the firm's operation by improving the enterprise's understanding of the factors that influence customer decision making, leading to more effective marketing and sales strategies;
- (2) Customer knowledge can improve service and support by enabling enterprises to reuse "best practice" solutions that have worked in one situation to solve similar problems for other customers;
- (3) Customer knowledge can help an organization predict which sorts of service and support offerings customers are likely to want or need, and develop more effective strategies for meeting these needs before they are even articulated.

Davenport, Harris, and Kohli (2001) have made contributions to knowledge management that especially focuses on the value of customer knowledge. They have interviewed 24 companies' marketing or marketing research executives and have found, among the firms, seven common practices for managing customer knowledge. These are outlined below.

- (1) Focus on the most valued customers. Customer knowledge management initiatives take time and effort, so a firm has to know which customers are worth the cost.

- (2) Define and prioritize objectives. Look at business strategies and customer relationship goals and realign customer knowledge management objectives accordingly.
- (3) Aim for the optimal knowledge mix. Use transaction data, but try to add some “human” data obtained from talking with customers.
- (4) Avoid one repository for all data. Davenport et al. (2001) pointed out that “the fully integrated customer knowledge environment seems to be more of an intriguing idea than a practical reality” (p. 67).
- (5) Think creative solutions to manage human knowledge: Davenport et al. (2001) found that the firms who use human knowledge, use both explicit and tacit human knowledge. Companies will use techniques, such as customer forums and monitoring customer service calls, to collect knowledge.
- (6) Look at the broader context. Davenport et al. (2001) found that most of the leading firms recognize that their success depends on the organization’s roles and responsibilities, a workplace culture that is customer-centric, and the structure of the organization.
- (7) Establish a process and tools. Davenport et al. (2001) have found that many firms need to establish a process for and tools for managing customer data, and translating

these data into knowledge.

Additionally, Lesser, Mundel, and Wiecha (2000) identified four approaches to expand the availability and use of customer knowledge. These are presented below.

- (1) Creating and nurturing enterprise-led “customer knowledge development dialogues”.

Lesser et al. (2000) point out that the dialogues must focus on developing an understanding of customer values and what drives customer decisions and actions.

- (2) Creating and operating enterprise-wide “customer knowledge communities”.

Customer knowledge communities help the firm organize and unify its customer approach to understand customers, and facilitate the transfer and use of this knowledge across organizational boundaries.

- (3) Facilitating the capture of knowledge-relevant data and the use of customer

knowledge at the point of customer contact. Lesser et al. (2000) indicate that customer service representatives and customers alike have less time to devote to each other. To solve these time pressures, companies use a combination of customer activity information and customized solutions to address customer dissatisfaction.

These systems enable customer service representatives to make real-time offers that can entice profitable customers back to the company.

- (4) Demonstrating enterprise leadership commitment to customer knowledge. Lesser et

al. (2000) point out that “increasing an enterprise’s customer focus and investing the resources and attention needed to initiate and maintain customer knowledge development dialogues and customer knowledge communities requires leadership attention” (p. 37).

The Discussion of Knowledge Sharing

A poll of over 1,600 U.S. managers revealed that knowledge management includes four areas: (1) managing tangible intellectual capital such as copyrights, patents, licenses, royalties, etc.; (2) gathering, organizing and sharing the company’s information and knowledge assets; (3) creating work environments to share and transfer knowledge among workers; and (4) leveraging knowledge from all stakeholders to build innovative corporate strategies (Wah, 1999, p. 18). Knowledge sharing is one important process of knowledge management, and the focus of this dissertation.

In noting the value of knowledge sharing, Riesenberger (1998) cites the following reasons for using knowledge sharing: (1) to learn about customers, (2) best practices, (3) internal competencies and products, (4) emerging market trends, and (5) competitive intelligence. Other benefits of knowledge sharing listed by respondents are: (1) increased responsiveness to customers, (2) increased innovation in new products and processes, (3) increased efficiency and productivity of knowledge workers, (4) improved

decision-making, and (5) increased flexibility and ability to adapt to change.

Lee (2001) has defined knowledge sharing as “activities of transferring or disseminating knowledge from one person, group, or organization to another” (p. 324).

Nonaka and Takeuchi (1995) have explored the power of knowledge sharing to firm performance. Creating knowledge and using this knowledge to develop successful products, services and systems is the key to firms sustaining their competitive advantage.

Some researchers have argued that tacit knowledge diffusion is more difficult than the sharing of explicit knowledge (e.g. Nonaka & Konno, 1998; Holthouse, 1998; Leonard & Sensiper, 1998; Bennett & Gabriel, 1999; Zack, 1999). An organization’s core competency is more than the explicit knowledge of “know-what”; it requires the more tacit “know-how” to put “know-what” into practice (Brown & Duguid, 1998). Brockman and Anthony (1998) note that the efficiency of making decisions, serving customers or producing products, and also the accuracy of task performance, are improved by the use of tacit knowledge. Tacit knowledge cannot be taught, trained or educated; it can only be learned. Learning tacit knowledge requires the active contribution of learner recognizing that the learning process takes time (Brockmann & Anthony, 1998).

Haldin-Herrgard (2000) has discovered four major reasons that make it difficult to

share tacit knowledge. One is perception and language. Perceptually, the characteristic of unconsciousness, i.e., people are not aware of the full range of their knowledge (Polanyi, 1958). Haldin-Herrgard state that the difficulty with the language lies in the fact that tacit knowledge comes in a non-verbal form. More experience and deeper knowledge often leads to difficulties in articulating the knowledge (p. 361).

Time is the second difficulty for sharing tacit knowledge. The internalization of knowledge requires a long time both for the individual and the organization (Bennett & Gabriel, 1999; Augier & Vendelo, 1999). Haldin-Herrgard (2000) states “For new employees the time for introduction is often insufficient and few of the currently employed have surplus time to attend to this introduction. The rapid change rate in today’s working life calls for continual lifelong learning and many employees are expected to take care of the learning needed. But still few organizations have reserved enough time for learning to achieve tacitness” (p. 362).

Value is the third difficulty. Haldin-Herrgard (2000) points out that “knowledge is power” is a phrase that is firmly embedded in our minds. Knowledge, especially in the knowledge society of today, has become a valuable asset on the labor market. “If this power is collective in an organization this is fine but for many this refers to the power an individual can gain by hoarding knowledge for individual use” (Haldin-Herrgard, 2000, p.

362). Thus, if knowledge is stored in an organizational memory, more organizational knowledge sharing occurs because knowledge that is stored and available becomes a resource that can be used by employees anytime, anywhere, and that remains as an organizational resource independently of the tenure of individuals (Walsh & Ungson, 1991; Huber, 1991).

The fourth difficulty of tacit knowledge sharing is distance. The need for face-to-face interaction is often perceived as a prerequisite for diffusion of tacit knowledge (Leonard & Sensiper, 1998; Holtshouse, 1998). Haldin-Herrgard (2000) notes that, although the modern information technologies have been developed for sharing knowledge, tacit knowledge is still hard to share technologically. However, some researchers believe that changing tacit knowledge into explicit knowledge may reduce the difficulties of sharing tacit knowledge.

In terms of sharing knowledge in professional service firms, Weiss (1999) has described knowledge sharing as comprised of two basic processes, which are “knowledge collection” and “knowledge connection”. Knowledge collection involves the accumulation and storage of knowledge and the recording of organizational memory by maintaining documents, files, and procedures. Knowledge connection involves linking “knowledge seekers” to “knowledge sources”. Knowledge connection facilitates the

identification and retrieval of needed knowledge, by accessing what has been made available through knowledge collection.

Usually, rationalized knowledge is collected in written form. Thus, firms collect and synthesize embedded knowledge to make it standardized and widely applicable for employees. Firms believe that rationalized knowledge may reduce costs and deliver a routine solution to multiple clients. On the other hand, embedded knowledge is usually collected from professionals' brains. Thus, firms may lose this knowledge if employees leave the organization. Even professionals do remain with the firm, they might not make it available to other professionals in the firm (Levitt & March, 1988; Webber, 1993; Brown & Duguid, 1991). Weiss (1999) points out that professionals sometimes are unwilling to share their faire experience (or mistakes) as it may reflect poorly on them or their team members. Thus, embedded knowledge may become sensitive in nature and difficult to collect.

As rationalized knowledge is usually collected in written form, employees generally know how to find it. Employees may "connect" rationalized knowledge with filling cabinets, libraries, databases, training sessions, email messages, and firm-wide newsletters, etc. Embedded knowledge, on the other hand, is usually difficult to connect as it tends to be distributed across multiple individuals' brains. As mentioned above

(Haldin-Herrgard, 2000), time is one difficulty associated with the sharing of tacit knowledge (embedded knowledge). Weiss (1999) also points out, “The personalized nature of embedded knowledge makes its retrieval more time consuming because it is generally acquired through conversations” (p. 70). Additionally, Weiss (1999) suggests that the retrieval of embedded knowledge depends on the corporation of the provider. The professionals’ willingness to share knowledge may be affected by the sensitivity of the knowledge, the amount of time required to share it, and the quality of the relationship between the knowledge seeker and knowledge source.

Interaction between Tacit and Explicit Knowledge

In terms of knowledge creation and sharing, Nonaka provides a model of knowledge creation. The model has been discussed in *Harvard Business Review* (Nonaka, 1991), a book titled *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation* (Nonaka & Takeuchi, 1995), and *California Management Review* (Nonaka and Konno, 1998). Nonaka’s model proposes the classification of knowledge as both tacit and explicit. It also emphasizes the importance of tacit knowledge, and works to make tacit knowledge explicit. Four modes for creating knowledge in organizations identified by Nonaka are: socialization, externalization, combination, and internalization.

The first mode is socialization, where knowledge is passed from one individual to another. Many researchers claim learning is a social action and interaction is needed to be able to learn (e.g. Argyris & Schon, 1978). The knowledge that moves from one person to another is tacit. This embedded form of knowledge is passed non-verbally, and the act of sharing, therefore, occurs through observation, imitation, and practice.

The second mode is externalization, which is a process of articulating tacit knowledge into explicit knowledge. Nonaka and Takeuchi (1995) emphasize that the externalization process is “the process of concept creation and is triggered by dialogue or collective reflection” (p. 64). “Deduction” and “induction” are frequently applied to create a concept (p. 64).

The third mode is a combination where knowledge has become explicit and the individual combines this knowledge with other explicit knowledge. Thus, “individuals exchange and combine knowledge through such media as documents, meetings, telephone conversations, or computerized communication networks. Reconfiguration of existing information through sorting, adding, combining, and categorizing of explicit knowledge can lead to new knowledge” (Nonaka & Takeuchi, 1995, p. 67).

The fourth mode is internalization, which is “a process of embodying explicit knowledge into tacit knowledge”. Knowledge in this mode becomes an individual’s

valuable asset. Finally, for the purpose of creating and sharing knowledge, “tacit knowledge accumulated at the individual level needs to be socialized with other organizational members, thereby starting a new spiral of knowledge creation” (Nonaka & Takeuchi, 1995, p. 69). Nonaka and Takeuchi (1995) argue that the key to the success of many Japanese firms lies in the fact that they have learned how to convert tacit knowledge into explicit knowledge.

The Collection of Customer Knowledge

To fill the gap in the knowledge management literature, which has recognized the importance of the customer as a source of knowledge that has not been addressed, Garcia-Murillo and Annabi (2002) proposed a conceptual model that incorporates customer knowledge as part of a firm’s knowledge. The idea of this conceptual model was generated from the research work of Nonaka (1991). Nonaka and Konno (1998) emphasize, “Socialization involves the sharing of tacit knowledge between individuals [We] use the term socialization to emphasize that tacit knowledge is exchanged through joint activities – such as being together, spending time, living in the same environment – rather than written or verbal instructions” (p. 42). Garcia-Murillo and Annabi (2002) argue that “personal interactions with customers, unlike transactional data, lead to richer content and help explain why customers do what they do. With

personal interactions, firms can speak directly with customers and get an idea of their source of problems, preference, and needs” (p. 875).

The model involves a three-step process for gathering knowledge during personal interactions with customers.

Step 1: Knowledge revealing

When the customer and salesperson come together, both of them bring their knowledge and experience to the interaction. In customer knowledge management, the role of salespeople changes so that instead of just providing information, the salespeople become attentive listeners for understanding customers’ needs. Thus, they gather and reveal knowledge from customers on product or service preferences and competing products.

Step 2: Knowledge sorting

Based on customer needs, the salespeople identify and sort the knowledge relevant to help customers make purchasing decisions. Garcia-Murillo and Annabi (2002) point out, “The knowledge identified by the salesperson should be articulated and presented to the customer not necessarily as pressure for sale but as a genuine effort to assist in the decision-making process” (p. 879). Additionally, firms need to consider the customer’s knowledge of the product and firm, the amount of information the customer needs, the

type of information appropriate to meet the customer's needs, and the time available for interaction.

Step3: Knowledge leveling

At this step, both the customer and the salesperson have obtained what they need. The customer has received general information about the product and service. On the other hand, the salesperson has received the information about customer preferences and needs. The interaction for exchange knowledge will repeat itself until both parties are eventually satisfied with the amount of information, type of information, and sharing of knowledge. Finally, Garcia-Murillo and Annabi (2002) conclude, "At the end of this process knowledge has been leveled and ideally the customer will have sufficient understanding of the product/service to make a decision. The salesperson will have optimized his/her interaction with the customer and gained valued knowledge" (p. 880).

Given the concept of knowledge management and its emphasis on knowledge sharing, this study broadly defines knowledge sharing as the activities that involve gathering, absorbing, and/or transferring product and/or service information between organizations and customers, alliance partners, and/or employees. It takes this information and then creates and develops the information into organizational knowledge. This knowledge can be used to meet the organizations' goals and strategies for success.

It also helps the organization gain a competitive advantage in the marketplace. Knowledge sharing in this study, therefore, is defined as organizational knowledge-sharing activities. The next section will introduce the activities that organizations will typically implement.

Organizational Knowledge-Sharing Activities

Based on prior research (Nonaka & Takeuchi, 1995; Davenport, Harris & Kohli, 2001; Lesser, Mundel & Wiecha, 2000; Gibbert, Leibold & Probst, 2002; Weiss, 1999; Haldin-Herrgard, 2000; Garcia-Murillo & Annabi, 2002; Lowendahl, Revang, & Fosstenlokken, 2001), this dissertation has identified the following knowledge-sharing activities that organizations will typically implement.

- (1) Focuses on the most valued customers and captures the knowledge from interactions (or “socialization”) with customers.
- (2) Creates a workplace culture that is moving toward the customer-centric.
- (3) Uses business strategies to know which customers to focus on and what new behaviors the customers should exhibit.
- (4) Develops enough appropriate repositories for knowledge collection.
- (5) Creates and utilizes techniques for collecting and sharing the knowledge from customers and partners.

- (6) Applies the competitive knowledge created to problem solving and decision making.
- (7) Creates a process and tool for managing customer data and translating data into knowledge.
- (8) Encourages its members to share their working experiences, such as their experiences in interacting with customers.
- (9) Transfers employees' working experiences into "resources" that can be used by employees anytime and anywhere.
- (10) Creates a place, such as a library, for employees to search for knowledge they need.
- (11) In order to avoid organizational boundaries, creates a community that allows the members of the organization to share and create knowledge.
- (12) Organization leadership supports the activities related to knowledge sharing.
- (13) Customers become "co-innovators" and "co-developers" of products or services.
- (14) Employees receive new job related knowledge from job training programs or conferences.
- (15) In order to develop the competitive products or services, the organization creates and shares knowledge with their partners.
- (16) In order to help customers make purchasing decisions, the organization helps customers to identify and sort the relevant knowledge.

These activities are the foundation for developing a measurement of knowledge sharing. Studies that measure knowledge sharing in professional service firms, who have been engaged in a strategic alliance, are almost non-existent. Developing a questionnaire to identify knowledge sharing is discussed in Chapter Three.

In summary, this section has reviewed the history of knowledge, the definition and theory of knowledge management, and the sharing of knowledge. Generally, knowledge has been classified as explicit or rationalized knowledge and tacit or embedded knowledge (Polanyi, 1966; Nonaka, 1991, 1994; Weiss, 1999). Explicit or rationalized knowledge is more easily shared than tacit or embedded knowledge because it is codified and collected in written form. On the other hand, the importance of the tacit or embedded knowledge has been recognized by many researchers because it resides in individuals' brains. Tacit knowledge is more difficult to share. Therefore, firms in today's competitive environment have concentrated on how to change tacit or embedded knowledge into explicit or rationalized knowledge.

Recently, customer knowledge management has been focused. Traditional marketing management has contributed to gathering and analyzing customer information and then trying to use this information to satisfy customer needs, but it has not yet been able to incorporate this information into a source of knowledge for the firm. Therefore,

firms need to encourage marketing people to interact/socialize (Nonaka & Takeuchi, 1995; Garcia-Murillo and Annabi, 2002) with customers. When interactions (socialization) between the marketing people and the customers have occurred, the firm will have the advantage of direct knowledge from customers. When knowledge has been properly utilized, the firm will have the capability of helping customer decision making and satisfying customer needs.

Knowledge sharing has been broadly defined as organizational knowledge-sharing activities in this study. Based on prior research, this section has presented knowledge-sharing activities that organizations typically implement. These activities are the foundation for the development of a measurement for knowledge sharing. This current study is concerned with how the sharing of knowledge relates to organizational marketing effectiveness. The next section will focus on the topic of organizational marketing effectiveness.

Marketing Concept and Marketing Effectiveness

This dissertation will also explore how the sharing of knowledge affects organizational marketing effectiveness. While the section above has addressed the concepts of knowledge and knowledge sharing, this section will discuss marketing effectiveness. First, the foundation of marketing effectiveness, i.e., the concept of

marketing, will be reviewed, and then marketing effectiveness will be examined.

Marketing Concept

The marketing concept was first articulated in the 1950s. Webster (1994) notes the following.

The old marketing concept grew out of the need to serve customers created by the conditions of post-World War II affluence and population growth. These consumers became the beneficiaries of aggressive competition among domestic producers, with new entrants in many industries as firms adjusted from military to peacetime production and entrepreneurs jumped at the prospect of unprecedented growth in consumer spending (p. 23).

Drucker, perhaps the pioneer of the marketing concept (Webster, 1988), proposed that “the customer is the foundation of a business and keeps it in existence” (Drucker, 1954, p. 37). Therefore, marketing can not be considered as a separate function. It encompasses the entire business. The whole business must be seen from the customer’s point of view (Drucker, 1954).

In today’s competitive environment businesses, however, a company will have to be “customer-focused, market-driven, global in scope, and flexible in its ability to deliver superior value to customer” (Webster, 1994, p. 24). The concept of customer value is at

the heart of the new marketing concept (Webster, 1994). Kotler (2000) states “The marketing concept holds that the key to achieving its organizational goals consists of the company being more effective than competitors in creating, delivering, and communicating customer value to its chosen target markets” (p. 19). Woodruff (1997) notes “Customer value is a customer’s perceived performance for and evaluation of those product attributes, attribute performances, and consequences arising from use that facilitate (or block) achieving the customer’s goals and purposes in use situations” (p. 142).

To complement Woodruff’s argument, Slater (1994) proposed a customer value-based theory of the firm. He pointed out that customer satisfaction is achieved when superior customer value is delivered by the business. Thus, “a firm has a competitive advantage when it possesses resources or skills that enable it to deliver customer value (p. 164).” However, he emphasizes that superior performance accrues to firms that have (1) a customer value-based organizational culture (i.e., a market orientation), (2) continuous learning about customers, (3) a commitment to innovation, and (4) an ability to organize themselves around customer delivery processes.

Webster (1994) proposed a new marketing concept. Webster thought that the old marketing concept encompassed customer-orientation, innovation, and profit as rewards

for creating a satisfied customer. The old marketing concept was a management philosophy. The new marketing concept is broader than the old. It is more than a philosophy. It involves 15 interrelated ideas, which are: (1) Create customer focus throughout the business, (2) Listen to the customer, (3) Define and nurture your distinctive competence, (4) Define marketing as market intelligence, (5) Target customers precisely, (6) Manage for profitability, not sales volume, (7) Make customer value the guiding star, (8) Let customers define quality, (9) Measure and manage customer expectations, (10) Build customer relationships and loyalty, (11) Define the business as a service business, (12) Commit to continuous improvement, (13) Manage culture along with strategy, (14) Grow with partner and alliances, and (15) Destroy marketing bureaucracy.

The literature above has reviewed the implementation of the marketing concept. Generally, the role of top management is important to the implementation of the marketing concept because top managers establish organizational values and beliefs (e.g. Schein, 1992). Thus, the organizational development or cultural change toward the marketing concept requires support from top management. This is the reason that the study of leadership behavior has been included in this dissertation. However, the measurement of the marketing concept implementation (especially the implementation of

knowledge-based marketing that integrates both knowledge-based and marketing concepts) is also important here. The following subsection introduces the measurement of knowledge-based marketing (marketing concept) implementation.

Marketing Effectiveness

Several researchers have found that the implementation of the marketing concept provides organizations with a competitive advantage that produces superior performance (e.g. Narver and Slater, 1990; Dickon, 1992; Hunt & Morgan, 1995; Day & Wensley, 1988). Graves (1999) points out, "The basic argument linking the marketing concept to organizational effectiveness is based on the notion that in dynamic, competitive environments organizations must respond to the needs of their customers" (p. 79). Generally, organizational effectiveness can be grouped into two major perspectives. The first perspective is an external approach. This is focused on the goals and systems of the organizations and their relationships with their environment. The second perspective is an internal approach which is focused on productivity and employee satisfaction.

For the external approach, the most widely used are the goal approach and the systems approach. In terms of the goal approach, Frisby (1986) states that the effectiveness of an organization "is measured according to the ability of the organization

to achieve desired objectives” (p. 95). Kerr (1991) explains that an effective organization “as one that achieves its goals” (p. 84). For example, organizations may have goals to earn a minimum return on equity (ROE), or to gain a particular market share.

In terms of the systems approach, Yutchman and Seashore (1967) discuss an organization’s effectiveness in terms of its bargaining position – that is how well it can exploit its environment in the acquisition of scarce and valued resources. The term “bargaining position” refers to the ability of the organization to acquire resources. According to Evan (1976), an organization is a social system which, in its interaction with the environment, activates at least four systemic processes: (1) inputs of various resources, (2) transformations of social and/or technical mechanisms, (3) outputs that transmitted to other systems, and (4) feedback effects, whether positive or negative (p. 19).

The goal and system approaches can reside within each other. Graves (1999) states “The system approach depends, at least implicitly on the notion of goals” (p. 85). Seashore (1983) supports this point of view. He points out, “The [systems perspective] suggests that effectiveness should be described and evaluated with reference to all attributes of the system that have some significant function in its adaptation, maintenance,

and transformation processes” (p. 58).

Kotler (1977) has illustrated the viewpoint of the external approach, however (Graves 1999). Kotler proposed the concept of marketing effectiveness within organizations. His concept was first presented in the *Harvard Business Review* (1977, November/December). Since then, the concept of marketing effectiveness has been widely adopted by academic researchers and business practitioners for measuring the organization’s marketing orientation (e.g. McCullough, Heng, & Khem, 1986; Sin & Tse, 2000; Appiah-Adu, 1999; Appiah-Adu, Fyall, & Singh, 2001; Webster, 1995; Leisen, Lilly, & Winsor, 2002). Generally, researchers believe that marketing effectiveness is made up of adoption and implementation of the marketing concept. Thus, the effective marketing organizations appear to be those organizations, which recognize the importance of nurturing customer association, possess a uniform set of values and beliefs and are characterized by an external orientation to their marketplace. In such organizations interactions with customers are characterized by a focus on service orientation, an emphasis on innovation and quality, as well as a viewpoint of the business from the customer’s standpoint (Dunn, Norburn, & Birley, 1985; Norburn, Birley, Dunn, & Payne, 1990). One study on marketing effectiveness found a relationship between marketing effectiveness and the size of the firm (Canning, 1988); another study found a

relationship between marketing effectiveness and geographical scope (i.e. local, regional, national, and global) (Block, 1989). To measure the implementation of knowledge-based marketing (marketing concept), this dissertation has adopted Kotler's (1977) conceptualization.

According to Kotler (1977), an organization's marketing effectiveness comprises the following five dimensions.

- (1) Customer philosophy: Does management acknowledge the primacy of the marketplace and of customer needs and wants in shaping company plans and operations?
- (2) Integrated marketing organization: Is the organization staffed so that it will be able to carry out marketing analysis, planning, and implementation and control?
- (3) Adequate marketing information: Does management receive the kind and quality of information needed to conduct effective marketing?
- (4) Strategic orientation: Does marketing management generate innovative strategies and plans for long-run growth and profitability?
- (5) Operational efficiency: Are marketing plans implemented in a cost-effective manner, and are the results monitored for rapid corrective action? (p. 72)

Later, in order to develop a valid and reliable measurement of marketing

effectiveness for service firms, Webster (1995) refined the framework of marketing effectiveness that was originally developed by Kotler (1977). There are two major differences between Webster's and Kotler's conceptualizations of marketing effectiveness. One is that Webster has combined the factors of "customer philosophy" and "integrated marketing organization". Webster (1995) pointed that this "may be due to the inherent characteristics of services marketing. In other words, a high degree of integration between marketing and other aspects of a service firm may be a prerequisite of a customer philosophy" (p. 9). Another is that Webster found slight differences in the factors of "adequate marketing information" and "strategic orientation". However, Webster still named these two factors the same as Kotler did because he thought that these two dimensions were so similar. Webster's framework, therefore, consists of the four dimensions – operational efficiency, customer philosophy, adequate marketing information, and strategic orientation. Recently, Leisen, Lilly and Winsor (2002) defined the dimensions of operational efficiency and customer philosophy to be internal and external marketing effectiveness respectively. The dimensions of adequate marketing information and strategic orientation were classified to be a mix of marketing effectiveness both internal and external. The four dimensions of marketing effectiveness were defined as following.

- (1) Operational efficiency: It refers to the internal marketing process that consists of internal communication, internal coordination, and internal implementation of marketing activities.
- (2) Customer philosophy: It refers to an organization's external focus on customer needs and wants, and monitoring of customer satisfaction.
- (3) Adequate marketing information: It comprises both internal and external issues and consists of estimates of sales potential and assessments of the cost effectiveness of various marketing expenditures.
- (4) Strategic orientation: It focuses on the organization's long-term survival and also reflects a merger of internal and external issues (Leisen, Lilly, & Winsor, 2002, p. 204).

Since the purpose of this dissertation is to study professional service firms who have been engaged in a strategic alliance, the definition of marketing effectiveness proposed by Webster (1995) is considered ideal.

In summary, this section has reviewed both the marketing concept and the marketing effectiveness concept. Kotler (2000) states "The marketing concept holds that the key to achieving its organizational goals consists of the company being more effective than competitors in creating, delivering, and communicating customer value to

its chosen target markets” (p. 19). Thus, the concept of customer value is the key to the marketing concept. Webster (1994) proposed a new marketing concept involving 15 interrelated ideas for market-driven managers.

The relationship between the marketing concept implementation and organizational effectiveness is based on the notion that “dynamic and competitive environment organizations must respond to the needs of their customers” (Graves, 1999, p. 79). Generally, organizational effectiveness has been classified into two categories, the external and internal approaches. The conceptualization of marketing effectiveness is a useful measurement for the implementation of knowledge-based marketing. Kotler (1977) proposed the concept of marketing effectiveness as an external approach. Kotler’s concept is the most renowned and frequently utilized, and thus, has been applied as the conceptual base of this dissertation.

In order to develop a valid and reliable measurement of marketing effectiveness for service firms, Webster (1995) refined Kotler’s concept. Given that this study will emphasize professional service firms, this study will adopt Webster’s measurement. Also, given that this dissertation will study the sharing of knowledge in the strategic alliance setting, the next section will focus on the knowledge-based approach in strategic alliances.

Strategic Alliance and Knowledge Management

Research on knowledge management in the strategic alliance setting has been receiving increased attention by scholars and practitioners (e.g., Ireland, Hitt, & Vaidyanath, 2002; Inkpen, 1996, 1998; Dyer & Nobeoka, 2000; Mowery, Oxley, & Silverman, 1996; Phan & Peridis, 2000). According to the resource-based view, organizational knowledge is a strategic resource of an organization (Wernerfelt, 1984). Strategic alliances have been adopted as *platforms* for members to collect and create the “resources” that a firm cannot create independently. Customer value creation is considered to be the major objective of knowledge management (Bukowitz & Williams, 1999). It has been suggested that building knowledge bases to serve customers and synthesize skills of network partners is often a leverage point for the alliance of firms (McKenna, 1991). Thus, recently, McNamara (1998) has proposed the concept of the knowledge based alliance, which he defines as “an inter-organizational relationship short of full integration of direction and routines in which final products are not traded, but the organizations combine and share knowledge bases and trade intellectual property rights” (p. 102). In this section an overview of strategic alliances will be provided first, and then the relationship between knowledge management and strategic alliance will be discussed.

Overview of Strategic Alliances

Gulati (1998) has defined strategic alliance as “Voluntary arrangements between firms involving exchange, sharing, or co-development of products, technologies, or services. They can occur as the result of a wide range of motives and goals, take a variety of forms, and occur across vertical and horizontal boundaries” (p. 293). The forms or types of strategic alliances have been identified by several researchers. For example, Coopers and Lybrand (1997) have identified seven types of alliances. There are: (1) joint marketing promotion, (2) joint selling or distribution, (3) production, (4) design collaboration, (5) technology licensing, (6) research and development contracts, and (7) other outsourcing purposes.

Some researchers, on the other hand, (Contractor & Lorange, 1988; Root, 1988; Killing, 1988) believe that the inter-firm cooperation can be classified into two main categories: non-equity contractual agreements and joint equity ventures. A non-equity contractual agreement is one where two or more firms legally agree to cooperate in performing the specific tasks or developing new products. No new organization or legal entity is created (Contractor, 1990). A joint equity venture, on the other hand, is one where two or more firms agree to pool portions of their resources to create a new legally independent entity (Killing, 1983; Kogut, 1988; Simonin, 1991). Unlike most

researchers, Borys and Jemison (1989) view both mergers and acquisitions as forms of alliances. When forming a strategic alliance, however, firms will tailor the form or type of alliance by meeting their needs and goals. The following subsection will review the current trend of strategic alliances in professional service firms, particularly accounting firms.

Professional Service Firms in the Strategic Alliances

Professional service firms, e.g. accounting, law, advertising, consulting, and engineering firms have followed the trend of providing a “one-stop-shop” experience to their clients. Baker emphasizes that “.... to align your firm with a network that gives you access to a broader range of services in the future the most viable form of structure for professional service firms will be through formal networks” (Dunn & Baker, 2003, p. 105). This dissertation, however, has used ABI Inform Global Database and company websites to research the strategic alliances trend in accounting firms (since 1999). The current trend in large international accounting firms will be reviewed first, and then local, small, and middle size CPA firms.

The formation of networks has been widely practiced by the large international accounting firms. Baker emphasizes, “The major accounting firms, in response to the needs of their global customers who required quality and consistency in the level of

service, globalized through forming alliances” (Dunn & Baker, 2003, p. 102). Thus, firms, such as KPMG International, Pricewaterhouse Coopers International (PwC), Deloitte Touche Tohmatsu (DTT), Ernst & Young (E&Y), and BDO International provide no professional services to clients. Instead, they have member firms, which are separate, and independent legal entities worldwide, to provide the professional services to their clients. The examples in Taiwan are provided in the following table:

Table 3

Strategic Alliances of Large Accounting Firms in Taiwan

The Firms	Strategic Alliances
Tzy Cherng CPA Firm	Tzy Cherng CPA Firm, established in 1970 by two accountants Gwo-Jang Ju and Jenn-Shean Chen, has joined PwC International to become a member firm of PwC International in Taiwan (http://www.pw.com/tw).
An-Hour Jiann-Yeh CPA Firm	KPMG International was formed in 1987 by the merger of Peat Marwick International (PMI) and Klynvold Main Goerdeler (KMG) and their individual member firms. In Taiwan, the member firms of PMI and KMG, named An Hour CPA Firm and Shye Her CPA Firm respectively, have merged to form An-Hour Shye-Her CPA Firm. Later in 1999, An-Hour Shye-Her CPA Firm merged with Jiann Yeh Union CPA Firm (the original Taiwan member of Coopers & Lybrand) to become An-Hour Jiann-Yeh CPA Firm and a member firm of KPMG International in Taiwan (http://www.kpmg.com.tw).
BDO Taiwan Union & Co	Two local CPA firms, Taiwan Union CPA Firm and Hsu Cheng Chou & Co. merged in 1990 to become Taiwan Union & Co. In 1992, the Company joined BDO International to conduct business globally and formed BDO Taiwan Union & Co (http://www.bdotaiwan.com.tw).
Jyh Yeuan CPA Firm	Jyh Yeuan CPA Firm has merged with several local CPA firms during the past 10 years. In 2001, the Company signed an agreement with Ernst & Young International to become a member firm of E&Y in Taiwan (http://www.ey.com/global/content.nsf/Taiwan/Home_C).
Kuang-Hsin Yih-Chyun CPA Firm	Kuang-Hsin Yih-Chyun CPA Firm was formed in 1988 with the merger of Kuang Hsin CPA Firm (since 1950) and Yih Chyun CPA Firm. In 1994, the Company joined RSM International to become a member firm in Taiwan (http://www.rsmi.com.tw).
Chin-Yeh Chung-Hsin CPA Firm	In 2003, two large CPA firms that Chin-Yeh CPA Firm (the former Arthur Anderson Taiwan member firm) and Chung-Hsin (a DTT Taiwan member firm) have merged to form Chin-Yeh Chung-Hsin CPA Firm. The Company will be the largest accounting firm in Taiwan (Chin-Yeh and Chung-Hsin have merged, 2003, May 30) http://www.deloitte.com.tw .

As these local large CPA firms join the international network, they have the advantage of interacting with the member firms in Hong Kong and Mainland China. Thus, they have the capability to serve Taiwanese owned companies to develop their business throughout the greater China region.

On the other hand, the U.S. member firms of these large international accounting firms have strategically aligned with organizations that can provide a “one-stop-shop” experience for their clients. Examples are listed in Table 4.

Table 4

Strategic Alliances of Large Accounting Firms in the United States	
The Firms	Strategic Alliances
BDO Seidman	BDO Seidman has launched BDO Seidman Alliance of Law Firms, billed as a program to offer law firms an alternative approach to remaining competitive while maintaining their independence in a time of industry consolidation. Brislawn Lofton law firm, with offices in Kirkland, WA. and Portland, OR., was the first law firm to join (BDO launches law firm alliance, 2001, September).
Ernst & Young LLP	Ernst & Young LLP has formed an alliance with a Washington DC based law firm named McKee Nelson Ernst & Young. The alliance company operates as an independent affiliate within the Ernst & Young global network (Herman, 1999).
KPMG LLP	KPMG has formed a strategic tax alliance with Morrison & Foerster, a U.S. West Coast law firm. Two other experts from SALTENT, a network of state and local tax experts, Howard Marcus & Berk from Chicago and Professor Walter Hellerstein from the University of Georgia have also joined this alliance. This alliance allows KPMG to enter the international tax arena (Baker, Hanson, & Smith, 2000).
PricewaterhouseCoopers LLP	Pricewaterhouse Coopers LLP and Hewlett Packard Co. have aligned to develop and market collaborative supply chain software to manufacturing companies. Pricewaterhouse Coopers LLP also entered a broad-range deal with Art Technology Group Inc, to jointly develop, market, and integrate CRM platforms (Clark, 2001).
RSM McGladrey, Inc.	RSM McGladrey, Inc. has formed a strategic alliance with Mass Mutual Financial Group of Springfield, MA; National Life Insurance Company of Montpelier, VT.; and Pacific Life Insurance Company of Newport Beach, CA. RSM McGladrey's goal with this alliance is "to provide its clients with a full menu of services that meet all their financial needs," said Connie Smith Benning, Communications Director of RSM McGladrey (Higgins, 2002).

While small and middle size CPA firms generally have limitations on time and staff, they are eager to meet their clients' varied and extensive needs; therefore, they build strategic alliances with organizations, such as financial services, insurance, or law firms. Recently, insurance companies are aligning with small or middle size CPA firms to provide clients with advice on what to do with their cash. CPAs are the advisors consumers trust most (King, 2000; CPA firms profit from alliances, 2000, June). Some examples of these types of alliances are listed below.

- (1) New York Life Insurance Company has created alliances with mostly small and middle sized regional accounting firms. Mike Burson, vice president of New York Life says "The nice thing is that CPAs are driven by relationships and the needs of their clients, like retirement planning and long-term care" (King, 2000).
- (2) Keller Bruner & Company, LLP, an accounting firm with offices in metropolitan Washington DC has formed a joint venture with Uniglobal Pension Planning office in New York and Virginia named Allied Pension Consulting. The Company provides administrative, consulting, and plan design service for qualified and unqualified retirement plans (Wolosky, 1999).
- (3) Bleich, Glass & Cordone, an accounting firm in New Brunswick, NJ has strategically aligned with Singer Financial Group, an insurance and financial service firm with

offices in Ramsey, NJ and New York City. The result is that Singer now markets a full range of accounting, auditing, tax planning, and business consulting services in addition to comprehensive insurance, individual financial and estate planning services, and employee benefits programs (Wolosky, 1999).

The formation of associations (or networks) also is practiced by small and middle size accounting firms as they expand their businesses into other states, and globally. For example, INTEGRA International is formed by 12 CPA firms based in New York City. INTEGRA International also invites other small and middle size firms around the world to join (Glickman, 2000). As a result, Richard Glickman, founder and president of INTEGRA, notes that a client, who was flying to London to settle his father-in-law's estate, has asked INTEGRA for the name of the London member firm to handle all of his affairs. Another example is that 18 local CPA firms have joined to create "Leading Edge Alliance". The effort is intended to supply member firms with the resources necessary to compete with consolidators while allowing the firms to remain independent. Therefore, the Alliance has provided member firms with an interactive network for sharing practice management knowledge, extensive best practices research and information, and strategies for the development of market-driven services (The leading edge, 1999, October; New alliance formed, 1999, October).

Knowledge Management in Strategic Alliances

Strategic management researchers (See *SMJ 1996 Special Issue* that was devoted to knowledge-based theories of the firm) have recognized that knowledge is a critical factor affecting an organization's ability to remain competitive in the new global marketplace. According to Grant (1996_a), "Knowledge has emerged as the most strategically-significant resource of the firm" (p. 375). The following statement by Badaracco (1991) may bring a better understanding to the relationship between knowledge and alliance. "Alliances are both a cause and an effect of knowledge-intensive competition. Collaboration helps firms learn from each other and thus accelerates the movement of knowledge" (p. 10). Additionally, Badaracco proposes a concept of knowledge links that are defined by the learning and creation of knowledge in the strategic alliance setting.

Knowledge links can be tactical or strategic. A single knowledge link can help a company build new skills in a limited area of its operations. This is a tactical effort. In contrast, when a company creates a multitude of knowledge links with customers, suppliers, labor organizations, universities, and other organizations, and when these alliances strengthen each other and support the company's long-term objectives, then knowledge links are genuinely strategic

(Badaracco, 1991, p. 107).

Therefore, through a strategic alliance setting, knowledge links: (1) can help firms learn specialized capabilities from other alliance firms; (2) can help firms combine their special capabilities with other alliance firms to create new embedded knowledge; (3) can enable firms to help other alliance firms build their skills and capabilities in ways that are of mutual benefit (Badaracco, 1991).

The examples mentioned above show a trend that accounting firms are facing today's competitive environment by conducting their businesses globally. They are urgently seeking knowledge to create customer value in the nations they serve and are forming international strategic alliances (such as joint ventures and networks) as ways to obtain this knowledge. Strategic alliances are considered a means for developing and exploiting the firm's resource base (Tsang, 2000). From an organizational learning perspective, strategic alliances have focused on how value is created through the enhancement of partner skills (Gulati et al., 2000). Additionally, Barkema, Shenkar, Vermeulen and Bell (1997) have pointed out that firms participating in international strategic alliances can learn how to create value by competing across national boundaries and in foreign markets. The concept of customer value is at the heart of the marketing concept (Webster, 1994). Different but complementary resources make it possible to

gain economies of scale, create synergies and develop new resources and skills to develop competitive advantage (Hitt, Harrison & Ireland, 2001; Ireland, Kuratko & Hornsby, 2001).

Strategic alliances have played an important role in obtaining and developing knowledge from outside a firm's traditional boundaries. Developing an effective knowledge-based alliance is challenging, however. Inkpen (1998) has stressed, "In the global arena, the complexities increase in scope as multinational firms grapple with cross-border knowledge transfers and the challenge of renewing organizational skills in various diverse settings" (p. 69). Ireland et al. (2002) state, "Alliance success is largely a function of how effectively and efficiently partners develop, transfer, integrate, and apply knowledge" (p. 436). Additionally, Lorenzoni and Lipparini (1999) have argued that the ability to integrate knowledge from inside (e.g. joint ventures) or outside (alliance firms) is a distinctive organizational capability.

Consequently, management practices to maintain knowledge-based alliances are important. Indeed, Dyer, Kale, and Singh (2001) have found that an ability to form and manage alliances more effectively than competitors is an important resource of competitive advantage. Ireland, Hitt, and Vaidyanath (2002) have stressed that superior alliance management practices can be a competitive advantage for the firm. Based on

prior research studies (Inkpen, 1996, 1998; Nonaka, 1994; Lyles, 1988; Glickman, 2000; Gamal, 2002; Birkinshaw, 2001; Tsai, 2001; Lyles & Salk, 1996; Lam, 1997; Badaracco, 1991; Kuglin & Hook, 2001), this dissertation has identified the following management practices that a firm's managers typically will implement in the knowledge-based alliance.

- (1) Meetings (that are open and regular and thus, may be monthly, quarterly, or temporary) between alliance firms' managers for the purpose of communication and knowledge developing and sharing.
- (2) Partner firm's regular visits for the purpose of knowledge sharing and learning.
- (3) Establish an agreement with a partner firm that allows sending a manager to the partner's firm for the purpose of learning (especially tacit knowledge) so it could be installed in the parent's firm.
- (4) In order to avoid organizational boundaries, create "communities of practice" that allow strategic alliance members to share and create knowledge.
- (5) For the purpose of "mobilizing" personal knowledge, firms establish a systematic plan to rotate the managers between joint ventures and the parent firm.
- (6) Creates strong and clear vision and strategic objectives that include creating a long-term mutually beneficial relationship.

- (7) Encourages alliance partners to work together and share their knowledge in the process of doing so.
- (8) Develops systems to codify existing and new knowledge to support future alliance activities.
- (9) Ensure parent managers work with senior alliance managers regularly.
- (10) Clearly understand the core competencies of alliance partners, and continually determine if these competencies are relevant for the firm's products / services (or markets) and what specific knowledge the partner has that can enhance the competitive advantage.
- (11) Creates the structural mechanisms (e.g., training sessions, conferences, internal consulting) for the purpose of knowledge transferring and sharing.

As mentioned earlier, knowledge sharing has been broadly defined as organizational knowledge-sharing activities. To meet the purpose of this study, these management practices will be combined with the knowledge-sharing activities to develop a measurement of knowledge sharing in the strategic alliance setting.

In summary, this section has provided an overview of strategic alliances. Both scholars and practitioners recognize the strategic alliance as a best *mechanism* or *platform* to learn, develop, transfer, and share knowledge within traditional organizational

boundaries. To meet the purpose of the present research objective, the current trend of strategic alliances in accounting firms, both in Taiwan and the United States has been reviewed. The formation of networks, associations, and joint ventures help businesses meet the challenges of global market competition. Therefore, firms participate in strategic alliances to obtain the resources they lack, and to develop new competitive advantage.

Management practices of knowledge-based alliances have been discussed, and a foundation for developing a measurement of knowledge sharing in strategic alliance setting has been identified. As this study will examine how leadership behaviors affect knowledge sharing and organizational effectiveness in strategic alliance settings, the next section will focus on these relationships.

The Relationships among Leadership Behaviors, Knowledge Management, and Organizational Effectiveness

To meet the purpose of the present research, this section reviews the relationship between (1) leadership behaviors and knowledge management, and (2) leadership behaviors and organizational effectiveness. Leadership behaviors are considered critical to achieving success with knowledge management. For purpose of this dissertation, knowledge sharing is broadly defined as organizational knowledge sharing related

activities which impact marketing effectiveness.

Leadership and Knowledge Management

This subsection will provide an overview of how leadership behaviors relate to knowledge management (knowledge sharing). Prior researches have been limited to providing empirical research to support this relationship. Nevertheless, there are some authors with viewpoints on this relationship.

Peter Drucker (1993) has explained that, as we enter a knowledge society, the workforce becomes dominated by knowledge workers. Drucker (2002) notes that “... knowledge workers are still a minority, but they are fast becoming the largest single group. And they have already become the major creator of wealth. Increasingly the success, indeed the survival, of every business will depend on the performance of its knowledge workforce” (p. 12). Further, Drucker (2003) says knowledge workers “don’t identify themselves as workers but as professionals. Such workers have two main needs: formal education enabling them to enter knowledge work in the first place, and continuing education throughout their working live to keep their knowledge up-to-date” (p. 8). The professional service firms (e.g. accounting, law, advertising, consulting, engineering firms, etc.) that are the research focus of this dissertation are classified as knowledge-intensive business services (Larsen, 2000). According to Larsen (2000),

these kinds of firms share common features, including the generally intangible nature of their products, markets that, in most cases are dominated by professional customers and a large proportion of staff with university degrees.

Drucker (2002) emphasizes that managing knowledge workers effectively is a big challenge. Knowledge workers are not objects to be manipulated. They are not doing things that are easily observable and also do not follow a set of predictable results (Knowledge workers, 2000, January). A research study conducted by Verrmaak and Weggeman (1999) found three core problems in professional organizations. These are: (1) fragmentation, because professionals like to go their own way, (2) mediocrity, because there is too little enthusiasm to learn from one another, and (3) non-commitment, because there is too little focus on results (p. 30 – 31). Therefore, Maister (1993) suggests that the key message to managers of professional service firms is to create meaning by helping subordinates to find excitement in their work. This is what Eckart Wintzen, founder of Dutch Software Multinational said “I do my utmost to spirit up my people with enthusiasm and to inspire them to work well together” (Verrmaak & Weggeman, 1999, p. 37). Hence, trust has emerged as collaboration has relied on it, and also trust has been recognized as key element strongly influencing the success of knowledge-based alliances.

As knowledge has often been perceived as a source of power, people tend to have feelings of “ownership” and hoard knowledge (Cole-Gomolski, 1997). Many professionals have little respect for others outside their field. Competition among professionals might be due to the result of reward and recognition. Thus, Verrmaak and Weggeman (1999) point out that those professionals who do not develop and share their knowledge together rest on their laurels.

For non-commitment, Drucker (1993) has stressed that “ ... knowledge workers own their knowledge and can take it with them wherever they go” (p. 8). Further, he envisions that the management of knowledge workers should be based on the assumption that the corporation needs them more than they need the corporation (Drucker, 2001). The behaviors of knowledge workers can become problems by impacting the sharing of knowledge within an organization, across organization, or within the network. Leadership has been recognized as a primary factor influencing and enhancing knowledge sharing (e.g. Comeau-Kirschner, 2000; Pauleen & Mason, 2002). Bailey and Clarke (2000) have defined knowledge management as “how managers can generate, communicate and exploit knowledge (usable ideas) for personal and organizational benefits” (p. 237). Organizational culture, on the other hand, plays an important role in the likelihood that employees will be willing to work together and share their knowledge

(e.g. Bollinger & Smith, 2001; Pauleen & Mason, 2002). Therefore, leadership should focus on establishing a culture that respects knowledge, reinforces its sharing, retains its people, and builds loyalty to the organization (Bollinger & Smith, 2001). Thus, McDermott and O'Dell (2001) have argued, "In an organization with a knowledge sharing culture, people would share ideas and insights because they see it as natural, rather than something they are forced to do. They would expect it of each other and assume that sharing ideas is the right thing to do" (p. 77).

Moreover, leadership is also be a key to building a trust-based culture and a trust-based organization as trust must be embedded in organizational culture to enable the sharing and creating of knowledge (Ribiere & Sitar, 2003; Huotar & Livonen, 2004). Additionally, McInerney (2002) argues that trust is the necessary means for building a culture that offers the continual creation and sharing of knowledge.

Bukowitz and Williams (1999) stress that in a knowledge intensive organization, leaders are no longer the source of knowledge and are no longer perched at the top of the organization but rather in the center. They need to have an ability to grasp value-creating knowledge for potential organizational uses. Thus, Drucker (2002) has argued that the only way to achieve leadership in a knowledge-based organization is "to spend time with promising knowledge professionals; to know them and to be known by

them; to mentor them and to listen to them; to challenge them and to encourage them” (p. 12). However, a question has emerged about what kind of leadership behavior would meet these requirements and could solve the problems as mentioned above. In other words, what kind of leadership behavior would be appropriate for knowledge intensive organizations, especially in a strategic alliances setting.

This dissertation proposes the answer can be found in transformational and transactional leadership behaviors (Bass & Avolio, 1994). Although there is no direct empirical evidence to suggest a relationship between transformational / transactional leadership behaviors and knowledge sharing, especially in strategic alliances settings, some prior researchers, who focused on examining the relationships among transformational / transactional leadership, organizational commitment, job satisfaction, and job performance, might imply this relationship (e.g. Dubinsky, Yammarino, & Spangler, 1995; Savery, 1991; Bass, 1985; Bass, Avolio, & Goodheim, 1987; Yammarino & Bass, 1990; Chen, 2001, 2002, 2003; Chen & Barnes, 2003_a, 2003_b).

For example, Chen (2001, 2002) has examined the relationship between transformational / transactional leadership behaviors and organizational commitment at three major steel companies in Taiwan. Chen’s study (with about 49% of undergraduate and higher education respondents classified as knowledge workers) found that

transformational behavior is slightly more correlated with organizational commitment than transactional leadership behavior. In particular, the dimensions of idealized influence, inspirational motivation, and individual consideration leadership were found to be more correlated with organizational commitment than other dimensions in both models. Further, two studies conducted by Chen and Barnes (2003_a, 2003_b) to comprehensively examine the effect of organizational culture on leadership, organizational commitment, job satisfaction at two local government agencies (with about 65% of undergraduate and higher respondents) and 84 small and middle-sized firms (with about 53% of undergraduate and higher education respondents) in Taiwan. Both studies have reported that transformational / transactional leadership behaviors have a positive relationship with these organizational behavior outcomes.

However, two recent studies conducted by Politis (2001, 2002) on examining the relationship of various leadership styles to knowledge acquisition attributes (Mykytyn, Mykytyn, & Raja, 1994) would be the most appropriate studies to support the research proposition of this dissertation. For the first study (Politis, 2001), five leadership styles that include self-management leadership (Manz & Sims, 1987), transformational leadership (Bass, 1985), transactional leadership (Bass, 1985), initiating structure, and consideration (Stodgill, 1963) have been conducted to examine the relationship to

knowledge acquisition attributes (Mykytyn et al., 1994). Politis has reported that overall self-management, transformational, and transactional leadership styles are positively correlated with some dimensions of knowledge acquisition attributes. Politis (2002) concluded that generally the dimension of attributed charismatic leadership has a positive and significant relationship with knowledge acquisition of knowledge workers. Thus, he argues that “such leaders must contribute to the creation of a corporate knowledge culture and a managerial mindset that promotes the flow of knowledge throughout the organization” (p. 194).

However, this dissertation will differ from Politis (2002) because it will concentrate on how both transformational and transactional leadership behaviors affect knowledge sharing related activities, which, in turn, impact the organizational marketing effectiveness in strategic alliance setting. Therefore, the next subsection will review the relationship between leadership behavior and organizational effectiveness (marketing effectiveness).

Leadership and Organizational Effectiveness (Marketing Effectiveness)

Research studying the relationships between leadership behaviors, especially transformational and transactional leadership and marketing effectiveness is almost non-existent. However, the concept of marketing effectiveness proposed by Kotler

(1977) has been classified as an external approach of organizational effectiveness (Graves, 1999). Therefore, the following empirical studies on examining the relationships between leadership behaviors and organizational effectiveness are provided to support the present research objective.

A study conducted by Rodsutti and Swierczek (2002) has examined the relationships between the four major components of leadership, which are: (1) international leader characteristics (Swierczek & Hirsch, 1994), (2) organizational culture (Swierczek, 1998), (3) multicultural management style (Swierczek & Hirsch, 1994), and (4) executive motivation (Hellriegel & Slocum, 1996), and organizational effectiveness. The results have indicated that the most effective companies are positively related to the dimensions of leader characteristics and organizational culture leadership. Additionally, managers who emphasize the multicultural management style have achieved a higher level of motivation. This motivation is strongly related to the internal perspective of organizational effectiveness.

Another study conducted by Wang and Satow (1994) has examined the relationships between four functional dimensions of leadership styles that consist of expectancy, sentiment, informative, and trustworthiness, and organizational effectiveness in Chinese-Japanese joint ventures. These four dimensions are outlined below.

(1) Expectancy function refers to the leader's expectation that subordinates will fully utilize their competence through direct instructions and responsibility; (2) Sentiment function emphasizes subordinates feeling and standpoints, shows concern to subordinates, cultivates healthy and warm interpersonal relationships, gives support to subordinates, and identifies with them; (3) Informative function focuses on providing subordinates with necessary information and knowledge at work and telling them the significance and the status of their tasks; and (4) Trustworthiness function relates to a leader's own ability or competence at the job (Wang & Satow, 1994, p. 32).

These four functional leadership styles are partially similar to the dimensions of idealized influence, inspirational motivation, intellectual stimulation, individualized consideration, and contingent reward in both transformational and transactional leadership behaviors. Wang and Satow (1994) have found that leadership functions, expectancy, sentiment, and informative are positively related with organizational effectiveness.

Furthermore, Pounder (2001) has asserted that university organizational effectiveness requires leaders, who have the flexibility to utilize an array of leadership characteristics subsumed under the transformational and transactional leadership behaviors. Additionally, Pawar and Eastman (1996) have pointed out that

transformational leadership is a particular form of strategic leadership which emphasizes the transformation of organization members and the linking of individual and collective interests. Thus, Neumann and Neumann (1999) argued that transformational leadership is appropriate for generating and effecting change. Bass (1997_b) stressed that the dimension of charisma (or idealized influence) in transformational leadership “is gained from customers, as well as colleagues, by being seen by them as someone who has mastered the details of his or her products and business, who is able to determine what is needed, and who is able to create innovative solutions to problems” (p. 23).

As marketing effectiveness has been measured by customer philosophy, operational efficiency, adequate marketing information, and strategic orientation (Webster, 1995; Kotler, 1977), these viewpoints would support the research proposition of this present study that transformational and transactional leadership behaviors would affect marketing effectiveness of the organization.

In summary, this section has examined the relationship between: (1) transformational/transactional leadership and knowledge sharing, and (2) transformational/transactional leadership and marketing effectiveness. Although direct empirical studies on these two relationships are almost non-existent, this section still provided some prior related research studies to support the relationships. However,

further examination on these two relationships will be provided in Chapter Three.

As this dissertation will examine how transformational and transactional leaderships affect the sharing of knowledge and, in turn, the marketing effectiveness of organizations in the strategic alliance setting, the next section will focus on the relationship between knowledge management and marketing effectiveness.

Relationship between Knowledge Management and Organizational Marketing Effectiveness

Is there a relationship between knowledge sharing and marketing effectiveness?

A survey done by Ipsos-Reid and Microsoft Canada Company (Doucet, 2001) might answer this question. It found that a majority of Canadian business leaders indicate that knowledge management practices have created value by improving organizational effectiveness, delivering customer value, and improving product innovation and delivery (Doucet, 2001). However, there is still a lack of academic research support for this relationship. This section here will provide some viewpoints for this relationship.

Brannback (1997) proposed the knowledge-based marketing concept which integrates both knowledge-based and marketing concepts. She defined knowledge management as “purposeful co-ordination of action” (p. 296). In other words, Brannback (1997) thinks that, in order to satisfy customers, the firm needs to understand

customer needs and then organize them into knowledge. Finally, knowledge will be transferred and blended into the marketing activities. Thus, Gibbert, Leibold, and Probst (2002) pointed out that customer knowledge management is about gaining, sharing, and expanding the knowledge residing in customers for both customer and corporate benefit.

On the other hand, Kotler (2000) has suggested that the purpose of the marketing concept is to profitably satisfy customer needs through integrated marketing activities. Kotler (2000) pointed out that “when all the company’s departments work together to serve the customer’s interests, the result is integrated marketing” (p. 22). Thus, customer focus is diffused throughout the organization rather than concentrated in the marketing department (Kohli & Jaworski, 1990). To widely disperse knowledge around the firm, integrated marketing activities involve knowledge-sharing activities within the firm or inter-firms to satisfy the customer needs and desires. This viewpoint is mostly based on the assumption that individuals within an organization contribute to the value the customer receives from the organization. If these individuals are aware of customers’ need and preferences, they are in a better position to enhance their contribution (Narver & Slater, 1990).

Graves (1999) has pointed out that “the basic argument linking the marketing

concept to organizational effectiveness is based on the notion that in dynamic, competitive environments organizations must respond to the needs of their customers” (p. 79). However, Kotler’s (1977) marketing effectiveness concept has illustrated the external approach of organizational effectiveness. Hence the concept of marketing effectiveness (Kotler, 1977) would be useful in measuring the implementation of knowledge-based marketing.

The discussion of the firm’s knowledge-sharing activities (See Nonaka & Takeuchi, 1995; Davenport, Harris, & Kohli, 2001; Lesser, Mundel, & Wiecha, 2000; Gibbert, Leibold, & Probst, 2002; Weiss, 1999; Haldin-Herrgard, 2000; Garcia-Murillo & Annabi, 2002) has been repeated in this section. Additionally, how these activities relate to marketing effectiveness (Kotler, 1977; Webster, 1995) therefore is discussed. In other words, this research proposes that knowledge-sharing activities are prerequisites for achieving high marketing effectiveness. Thus, the following overview and Table 5 includes Webster’s (1995) four dimensions of marketing effectiveness.

In terms of the customer philosophy dimension, the firm will be measured by the answers to three questions: (1) Does management recognize the importance of designing the company to serve the needs and wants of the chosen market? (2) Does management develop different offerings and marketing plans for different segments of the market? and

(3) Does management take a whole marketing system view in planning its business?

(Kotler, 1977; Webster, 1995) On the side of knowledge-sharing activities, Davenport, Harris, and Kohli (2001) have found that when firms implement knowledge management, firms create a customer-centric culture focused especially on the most valued customers. In order to understand customer needs, the firm will capture knowledge from the interaction (or “socialization”) with customers. This knowledge may include those preferences with respect to the products or services; competing products; and industry trends (Garcia-Murillo & Annabi, 2002; Nonaka & Takeuchi, 1995). Interaction implementation will enable firms to learn from customers. Thus, customers will become “co-innovators” and “co-developers” of products or services (Gibbert, Leibold, & Probst, 2002). Hence, the activities mentioned above will be the prerequisites to the dimension of customer philosophy.

In terms of the operational efficiency dimension, the firm will be measured by answering six questions: (1) How well is marketing thinking, at the top, communicated and implemented down the line? (2) Does management show a good capacity to react quickly and effectively to on-the-spot developments? (3) Does management commit to marketing excellence? (4) Does management do an effective job with the marketing resources? (5) How well is marketing management working with the management in

other functional areas? and (6) Does management focus on letting the firm be a good community neighbor? (Kotler, 1977; Webster, 1995) However, the role of leadership is also important here. Thus, this dissertation will examine that the possible mediating role of knowledge sharing in the relationships of transformational and transactional leadership behaviors and organizational marketing effectiveness. Lesser, Mundel and Wiecha (2000) have supported this viewpoint. They point out, "Leaders need to exhibit their commitment to creating a customer-focused operation; demonstrating their conviction that improving the enterprise's customer knowledge is key to implementing successful performance changes" (p. 37). Additionally, to avoid the organizational boundaries, it has been suggested that organizations create a community that allows members to share and create knowledge. Thus, the competitive knowledge created will be applied to problem solving and decision making (Lesser, Mundel & Wiecha, 2000). Davenport, Harris, and Kohli (2001) have found that, when firms implement knowledge management, they have realigned their organization to become more customer-focused. Additionally, firms create a process and tool for managing customer data and transferring data into knowledge. Additionally, job training programs and conferences will help firms to disseminate knowledge to their workforce (Gibbert, Leibold & Probst, 2002). Hence, the activities mentioned above will be reflected on the dimension of operational

efficiency.

In terms of adequate marketing information, the firm will be measured by answering four questions: (1) What effort is expended to measure the cost-effectiveness of different marketing expenditures? (2) How well does management know the sales potential and profitability of different market segments? (3) Is regular marketing research on customer behaviors conducted? and (4) What is the extent of formal market planning? On the side of knowledge-sharing activities, therefore, firms (especially professional service firms) have been encouraged to have their members share their working experiences, such as how the experiences interact with clients. Firms have concentrated on transferring the workforce's working experiences (tacit knowledge) into a "resource" (explicit knowledge) (Weiss, 1999; Nonaka & Takeuchi, 1995). The appropriate repositories will be developed for knowledge collection. Additionally, firms create and utilize techniques for collecting and sharing knowledge from customers and partners (Davenport, Harris, & Kohli, 2001). Hence, the activities mentioned above will be reflected on the dimension of adequate marketing information.

In terms of strategic orientation, the firm will be measured by answering three questions: (1) What is the quality of current marketing strategy? (2) Does the firm focus on long-term growth? and (3) Does management define and communicate the business?

On the side of knowledge-sharing activities, therefore, Davenport, Harris, and Kohli (2001) have found that, when firms implement knowledge management, they have business strategies to know which customers to focus on and what new behaviors the customers should exhibit. Additionally, Lesser, Mundel and Wiecha (2000) point out that the knowledge collected from customers will provide guidance and direction to help firms understand the factors that influence customer decision making, thus leading to more effective marketing and sales strategies. Hence, the activities mentioned above will be the prerequisites to the dimension of strategic orientation.

Table 5

Knowledge-Sharing Activities vs. Marketing Effectiveness	
Knowledge-Sharing Activities	Dimensions of Marketing Effectiveness
	<i>Customer Philosophy</i>
(1) Firm create a workplace culture that is moving toward the customer-centric.	(1) Does management recognize the importance of designing the company to serve the needs and wants of the chosen market?
(2) Firm focuses on the most valued customer and collects the knowledge from interaction with customers.	(2) Does management develop different offerings and marketing plans for different segments of the market?
(3) Customers become “co-innovators” and “co-developers” of products or services.	(3) Does management take a whole marketing system view in planning its business?
	<i>Operational Efficiency</i>
(1) Leadership supports the activities related to knowledge sharing.	(1) How well is marketing thinking, at the top, communicated and implemented down the line?
(2) To avoid the organizational boundaries, the firm creates a community that allows the members of the firm to share and create the knowledge.	(2) Does management show a good capacity to react quickly and effectively to on-the-spot developments?
(3) The competitive knowledge created will be applied to problem solving and decision making.	(3) Does management commit to marketing excellence?
(4) The firm creates a process and tool for managing customer data and translating data into knowledge.	(4) Does management do an effective job with the marketing resource?
(5) Employees receive new job related knowledge from job training programs or conferences.	(5) How well is marketing management working with management in other functional areas?
	(6) Does management focus on letting the firm be a good community neighbor?

Table 5

Knowledge-Sharing Activities vs. Marketing Effectiveness (Continue)	
Knowledge-Sharing Activities	Dimensions of Marketing Effectiveness
	<i>Adequate Marketing Information</i>
(1) Firm encourages its members to share their working experiences.	(1) What effort is expended to measure the cost-effectiveness of different marketing expenditures?
(2) Firm transfers employees' working experiences into a "resource".	(2) How well does management know the sales potential and profitability of different market segments?
(3) Firm creates a place, such as a library, for employees to search knowledge.	(3) Is regular marketing research on customer behaviors conducted?
(4) Firm develops enough appropriate repositories for knowledge collection.	(4) What is the extent of formal market planning?
(5) Firm creates and utilizes techniques for collecting and sharing the knowledge from customers and partners.	
(6) To avoid the organizational boundaries, the firm creates a community that allows the members of the firm to share and create the knowledge.	
	<i>Strategic Orientation</i>
(1) Firm has business strategies to know which customers to focus on and new behaviors the customers should exhibit.	(1) What is the quality of current marketing strategy?
(2) Customer knowledge collected will be the guidance and direction for developing marketing strategy.	(2) Does the firm focus on long-term growth?
	(3) How does management define and communicate the business?

Furthermore, this section reviews value creation processes (VCPs) proposed for professional service firms (PSFs) by Lowendahl, Revang, and Fosstenlokken (2001).

The purpose of reviewing the VCPs is to give another viewpoint for enhancing the research proposition that knowledge sharing related activities are the prerequisites to marketing effectiveness. The concept of marketing effectiveness is based on the

marketing concept as described previously. Webster (1994) has pointed out that the concept of customer value has become the heart of the new marketing concept. Additionally, Kotler (2000) pointed out that “the marketing concept holds that the key to achieving its organizational goals consists of the company being more effective than competitors in creating, delivering, and communicating customer value to its chosen target markets” (p. 19). Hence, this dissertation addresses VCPs (Lowendahl, Revang, & Fosstenlokken, 2001).

According to Lowendahl, Revang, and Fosstenlokken (2001), the “value creation processes of professional service firms-framework” consists of two contextual components that include both the domain choice and the resource base. These two components constrain and enable the VCPs of PSF for each specific project. The central component of the framework is service delivery. For the domain choice, PSFs have to understand the types of clients the firm targets, the types of services to be delivered, and in how many places. According to Greenwood, Hinings, and Brown (1990), the resources in the professional service firms play a key role in developing superior value for clients as well as owners. Knowledge is considered a potential source of innovation and value creation (e.g. Leonard & Sensiper, 1998; Leonard-Barton, 1995; Teece, 1998). PSFs have to determine what kind of knowledge will be needed by target clients, and

whether or not individual professionals can independently carry out their functions or whether they will need support by a sophisticated knowledge management system. In some cases, inter-organizational knowledge sharing may be required. In terms of service delivery, PSFs need to understand the degree of customization of service. Task characteristics are varied based on the different types of services. Thus, coordination of service delivery plays an important role. Based on the characteristics and skills of employees, the leaders of PSFs need to coordinate what professionals should do, where they should do it, what kind of knowledge they should apply, and whether the firm needs to collaborate with partners to provide the service.

The purpose of VCPs is to deliver superior service value to the target clients, as well as to provide value to the owners and other firm members such as strategic partners. According to Lowendahl, Revang and Fosstenlokken (2001), “Owners gain both from financial returns and knowledge development, as the latter, to the extent that new knowledge is retained within the firm, is in many ways similar to retained earnings” (p. 919).

In summary, although there is a lack of academic research to support whether or not there is a relationship between knowledge sharing and marketing effectiveness, this section still provides some viewpoints to address this relationship. The

knowledge-based marketing concept proposed by Brannback (1997) has been applied to link knowledge management and the marketing concept. Since the concept of marketing effectiveness, on the other hand, is built on the marketing concept, it makes sense that the implementation of knowledge-based marketing will be measured by marketing effectiveness. This research considers knowledge sharing related activities prerequisites to the marketing effectiveness. The VCPs for PSFs (Lowendahl, Revang, & Fosstenlokken, 2001) have been reviewed to enhance the research proposition.

Chapter Summary

In summary, this Chapter has reviewed: (1) the definitions and theories of leadership, (2) the theories of transformational and transactional leadership, (3) the definitions and theories of knowledge management (knowledge sharing), (4) the concept of marketing effectiveness, (5) the relationship between knowledge management (knowledge sharing) and strategic alliances, (6) the relationships among leadership, knowledge management (knowledge sharing), and marketing effectiveness, and (7) the relationship between knowledge sharing and marketing effectiveness.

The literature review began with an historical overview of leadership definitions and theories. Generally, leadership has been defined as building vision, trust, value, commitment, and working environment, and also as an influencing activity to accomplish

organizational goals. In the historical development of leadership, much of leadership research covers leadership traits, behavior, power and influence, and situational approaches.

In recent years, scholars have attempted to streamline and integrate these approaches, and many studies are focusing on identifying the characteristics and value of transformational and transactional leadership behaviors. Thus, this research focuses on transformational and transactional leadership behaviors. However, the present research will examine which leadership behavior would positively affect the sharing of knowledge. Thus, the topic of knowledge management (knowledge sharing) has been focused.

Generally, knowledge has been classified as explicit or rationalized knowledge and tacit or embedded knowledge. The characteristics of these two types of knowledge have been reviewed. Traditional marketing management research has contributed to gathering and analyzing customer information, and then trying to use it to satisfy customer needs. Yet, it did not consider using this information as a source of knowledge for the firm. Customer knowledge management has emerged to fill this gap.

Based on prior research, this literature review has summarized the knowledge sharing related activities that organizations will typically implement. These activities will be the foundation for developing a measurement of knowledge sharing. Since this

current study is also concerned with how the sharing of knowledge affects organizational marketing effectiveness, the concept of marketing effectiveness has been discussed. In order to develop a useful measurement for service firms, Webster (1995) has refined Kotler's (1977) concept of marketing effectiveness. This study will adopt Webster's measurement to examine professional service firms who have been engaged in a strategic alliance.

This study focuses not only on intra-organization knowledge sharing but also focuses on knowledge sharing of strategic alliances. Thus, an overview of strategic alliances and the current trend of strategic alliances in accounting firms have been provided. Developing an effective knowledge-based alliance is challenging. Research studies have found that the ability to manage alliances effectively is a competitive advantage of the organization. Based upon prior research studies, management practices of knowledge-based alliances have been summarized. In developing a measurement of knowledge sharing, these management practices are combined with organizational knowledge-sharing activities.

Lastly, this chapter discussed the relationship between: (1) transformational and transactional leadership behaviors and knowledge sharing, (2) transformational and transactional leadership behaviors and marketing effectiveness, and (3) knowledge

sharing and marketing effectiveness to support the present research objectives.

Although direct empirical studies on these three relationships are almost non-existent this

chapter still provided some related prior research studies support the relationships.

Additionally, this present study considers the knowledge-sharing activities to be

prerequisites to marketing effectiveness.

To date, no research has examined the relationships among transformational and

transactional leadership behaviors, knowledge sharing, and marketing effectiveness in

professional service firms who have strategically aligned. Therefore, this dissertation

will be unique in that it will help to fill this gap. Chapter III will develop a

methodology to answer the research questions.

CHAPTER III

METHODOLOGY

Overview

Chapter one discussed how many firms are beginning to recognize that sharing of knowledge within and between organizations is a top priority for firms striving to build competitive advantage and succeed in today's increasingly competitive environment. Customer value creation is considered to be the major objective of knowledge management. Thus, the importance of customer knowledge management has been stressed. Strategic alliances have been adopted as *platforms* or *mechanisms* for firms to collect and create "resources" they cannot create independently.

A knowledge-based marketing concept was discussed. The concept is based on the idea that, in order to satisfy customers, the firm needs to understand customer needs and organize these needs into knowledge. Finally, this knowledge should be transferred and blended into marketing activities. The concept of marketing effectiveness has been proposed as a way to measure the practice of knowledge-based marketing in a strategic alliance setting.

Leadership has also been recognized as a primary factor in influencing and succeeding in knowledge-based alliances. Two types of leadership behaviors are

addressed in this study: transformational and transactional leadership. Hence, a linkage among leadership, knowledge, marketing, and strategic alliance has been emerging. This dissertation, therefore, examines how transformational and transactional leadership behaviors affect knowledge sharing, which, in turn, impact the marketing effectiveness of the organization in terms of strategic alliances.

The setting of this dissertation was a specific type of professional service firm that has been engaged in a strategic alliance. The specific setting for this research study was large-sized accounting firms in Taiwan and the United States.

Consistent with the objectives of this study, the literature review encompassed the following topics: (1) an historical overview of leadership definitions and theories, (2) a review of the literature on transformational and transactional leadership behaviors, (3) the definitions and the theory of knowledge management (knowledge sharing), (4) a review of the literature on the marketing concept and marketing effectiveness, (5) an analysis of research on the relationship between knowledge management (knowledge sharing) and strategic alliances, (6) an analysis of research on the relationships among leadership, knowledge management (knowledge sharing), and organizational effectiveness (marketing effectiveness), and (7) an analysis of research on the relationship between knowledge management and organizational marketing effectiveness. Apparently no

research studies have examined how transformational and transactional leadership behaviors affect knowledge sharing, and how this impacts the marketing effectiveness of the organization in terms of strategic alliances. Therefore, this dissertation is unique in that it encompasses all three areas.

The purpose of this chapter is to develop a methodology to answer the research questions: (1) How do the transformational and transactional leadership behaviors affect the sharing of knowledge in the strategic alliance setting? (2) How does knowledge sharing affect the organizational marketing effectiveness in the strategic alliance setting? and (3) How do the transformational and transactional leadership behaviors affect the sharing of knowledge and, in turn, the marketing effectiveness of organizations in the strategic alliance setting? Also, this chapter covers the research hypotheses, the research model (Figure 1), variables, instrumentation, pilot test, population and sample, the method of data collection, and statistical techniques.

Research Hypotheses

The three research questions stated above were used to form the following hypotheses. Although there are few, if any, research studies lending support to these hypotheses, some of the literature implies that such relationships do exist. The present study intends to test these hypotheses, which are listed below.

Testing the Effects of Leadership Behaviors to the Sharing of Knowledge

H₀₁: Leaders' transformational leadership is negatively correlated or not correlated with the sharing of knowledge in the strategic alliance setting.

H_{A1}: Leaders' transformational leadership is positively correlated with the sharing of knowledge in the strategic alliance setting.

H₀₂: Leaders' transactional leadership is negatively correlated or not correlated with the sharing of knowledge in the strategic alliance setting.

H_{A2}: Leaders' transactional leadership is positively correlated with the sharing of knowledge in the strategic alliance setting.

Although there is no direct empirical evidence suggesting a relationship between transformational/transactional leadership behaviors and knowledge sharing in strategic alliances settings, several prior studies that focused on examining the relationships among transformational/transactional leadership, organizational commitment, job satisfaction, and job performance imply such a relationship (e.g. Dubinsky, Yammarino & Spangler, 1995; Savery, 1991; Bass, 1985; Bass, Avolio & Goodheim, 1987; Yammarino & Bass, 1990; Chen, 2001, 2002, 2003; Chen & Barnes, 2003_a, 2003_b). Politis's most recent studies (2001, 2002) on examining the relationship of various leadership behaviors to knowledge acquisition attributes (Mykytyn, Mykytyn & Raja, 1994) would be the most

appropriate studies to support this research hypothesis. Politis (2001) has found that overall self-management, and transformational and transactional leadership styles are positively correlated with some dimensions of knowledge acquisition attributes. Politis (2002) also found that, generally, the dimension of attributed charismatic leadership has a most positive and significant relationship with knowledge acquisition of knowledge workers. Therefore, this study proposes that transformational and transactional leadership behaviors have a significant relationship with the sharing of knowledge in strategic alliance settings.

Testing the Effects of Knowledge Sharing to Marketing Effectiveness

H₀₃: The sharing of knowledge is negatively correlated or not correlated with the marketing effectiveness of the organization in the strategic alliance setting.

H_{A3}: The sharing of knowledge is positively correlated with the marketing effectiveness of the organization in the strategic alliance setting.

Although there is a lack of academic research support for the relationship between knowledge sharing and marketing effectiveness, some prior research studies provides some indication of such a relationship. Brannback (1997) first proposed a knowledge-based marketing concept. She believed that, in order to satisfy customers, the firm needed to understand customer needs and then organize these needs into

knowledge. Customer knowledge management is about gaining, sharing, and expanding the knowledge residing in customers for both customer and corporate benefit (Gibbert, Leibold, & Probst, 2002, p. 460). This knowledge should be transferred and blended into marketing activities.

Kotler (2000) has suggested that the purpose of the marketing concept is to profitably satisfy customer needs through integrated marketing activities. Kotler (2000) pointed out that “when all the company’s departments work together to serve the customer’s interests, the result is integrated marketing” (p. 22). Thus, customer focus is diffused throughout the organization rather than concentrated in the marketing department (Kohli & Jaworski, 1990). To widely disperse knowledge around the firm, integrated marketing activities involve knowledge-sharing activities within the firm or inter-firms to satisfy the customer needs and desires.

Additionally, Kotler (1977) proposed the concept of organizational marketing effectiveness. Prior research studies (McCullough, Heng, & Khem, 1986; Sin & Tse, 2000; Appiah-Adu, 1999; Appiah-Adu, Fyall, & Singh, 2001; Webster, 1995; Leisen, Lilly, & Winsor, 2002) found that marketing effectiveness is made up of adoption and implementation of the marketing concept. Hence, the concept of marketing effectiveness (Kotler, 1977) is useful in measuring the implementation of

knowledge-based marketing.

Knowledge-sharing activities that organizations will typically implement have been proposed based upon prior research studies (See Chapter II). This study proposes that these activities are the prerequisites for achieving high marketing effectiveness. Using Webster's (1995) four dimensions of marketing effectiveness, the previous chapter has depicted the relationship between knowledge-sharing activities and these dimensions. Therefore, this study proposes that the sharing of knowledge has a positive relationship with the marketing effectiveness of the organization in the strategic alliance setting.

Testing the Mediating Effects of Knowledge Sharing

H₀₄: The sharing of knowledge does not mediate the relationship between transformational leadership and marketing effectiveness of the organization in the strategic alliance setting.

H_{A4}: The sharing of knowledge mediates the relationship between transformational leadership and marketing effectiveness of the organization in the strategic alliance setting.

H₀₅: The sharing of knowledge does not mediate the relationship between transactional leadership and marketing effectiveness of the organization in the strategic alliance setting.

H_{A5}: The sharing of knowledge mediates the relationship between transactional leadership and marketing effectiveness of the organization in the strategic alliance setting.

The relationships between transformational and transactional leadership behaviors and knowledge sharing have been mentioned above. Prior related research studies have implied that transformational and transactional leadership behaviors have a positive relationship with the sharing of knowledge. However, this dissertation proposes that knowledge-sharing activities are the prerequisites for achieving high marketing effectiveness. The previous chapter depicted the relationship between knowledge sharing related activities and marketing effectiveness (Webster, 1995). Moreover, prior research studies have suggested that leadership behaviors are related to organizational effectiveness (Rodsutti & Swierczek, 2002; Wang & Satow, 1994). Thus, knowledge sharing has met the criterion of a mediating variable for this study (Barson & Kenny, 1986). Consequently, this study proposes that changes in transformational and transactional leadership behaviors lead to change in the levels of knowledge sharing and, in turn, in the levels of marketing effectiveness in the strategic alliance setting.

The Research Model

To study the research questions, the research model has been developed for this study.

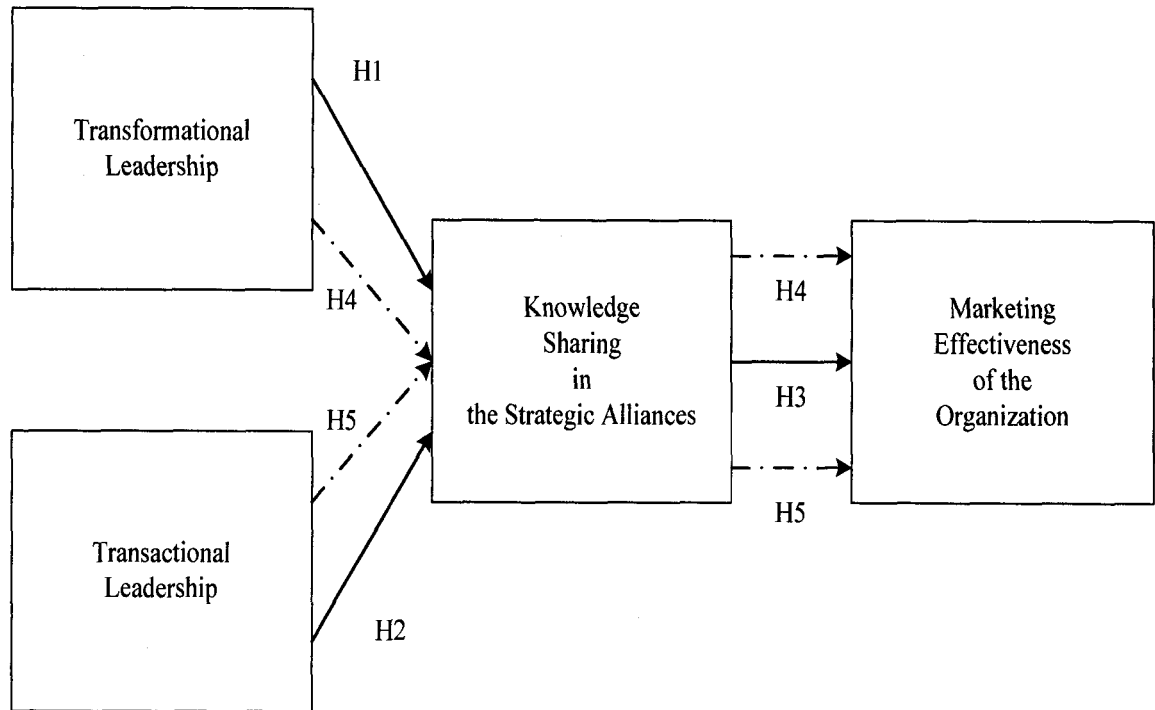


Figure 1: The research model

Variables

The research model (Figure 1) developed for this study contains two independent variables, one mediating variable, and one dependent variable for studying the research questions.

Independent Variables

The two independent variables are: (1) transformational leadership behavior (containing five dimensions: idealized influence attributed, idealized influence behavior,

inspirational motivation, intellectual stimulation, and individualized consideration); and (2) transactional leadership behavior (containing four dimensions: contingent reward, active management by exception, passive management by exception, and laissez-faire). Research participants of this study (knowledge workers) were asked to describe the leadership behaviors of managers who are directly leading them.

Mediating Variable

The mediating variable is knowledge sharing. Research participants of this study were asked to assess how well their companies implement the sharing of knowledge both within and between organizations in the strategic alliance.

Dependent Variable

The dependent variable is marketing effectiveness of the organization. Marketing effectiveness was measured by utilizing Webster's (1995) four dimensions of marketing effectiveness, which are customer philosophy, operational efficiency, adequate marketing information, and strategic orientation. Research participants of this study were asked to assess how well their companies implement these four dimensions.

Instrumentation

To answer the research questions, three instruments were used: (1) Multifactor Leadership Questionnaire (MLQ – 5X Short Form) (Bass & Avolio, 2000), (2) Marketing

Effectiveness Questionnaire (Webster, 1995), and (3) Questionnaire of Knowledge Sharing in Strategic Alliance Setting. Note that this study integrated these questionnaires with the demographic questions required for data collection. The integrated questionnaire is included as Appendix A. Since some of the survey respondents are citizens of the Republic of China, the questionnaire was translated into Chinese, and this version is provided in Appendix B. Additionally, the permissions for using the instruments are provided in Appendix C. However, there is still a lack of empirical studies on the topic of knowledge sharing that focuses on the strategic alliance setting (especially for professional service firms). Thus, developing an appropriate instrument for the purpose of this study was necessary and is discussed later in this chapter.

Multifactor Leadership Questionnaire (MLQ – 5X Short Form)

Bass and Avolio (2000) developed the MLQ based on Burns's (1978) work. Since 1982, there have been many revised versions of the MLQ. The MLQ – 5X, questionnaire used in this study was developed by the following procedure:

- (1) A series of factor analyses with MLQ 5R were completed, which provided a base for selecting items that exhibited the best convergent and discriminant validities.
- (2) Items were selected for inclusion in the MLQ – 5X by reviewing preliminary results

of an earlier version of Howell and Avolio's (1993).

- (3) Distinctions between charismatic from transformational leadership were identified.
- (4) Based on the conceptual model of the full range of leadership (Avolio & Bass, 1991), six scholars in the field of leadership were invited to contribute recommendations for modifying and/or eliminating items included in the earlier version of MLQ – 5X (MLQ Form 10).

Appendix A contains the MLQ – 5X version of the study. It consists of 45 items to measure transformational leadership, transactional leadership, and three additional variables (which are willingness to exert extra effort, leadership effectiveness, and satisfaction). A five-point Likert scale, ranging from “not at all” valued as a “1” to “frequently if not always” valued as a “5,” was used. This study examined the “full range” of transformational leadership and transactional leadership behaviors.

The transformational leadership behaviors measured by the MLQ are idealized influence attributed, idealized influence behavior, inspirational motivation, intellectual stimulation, and individualized consideration. Gellis (2001) is one researcher to adopt this questionnaire for his empirical study, and found that the reliabilities for the five dimensions of transformational leadership are: 0.78, 0.81, 0.80, 0.89 and 0.77, respectively. The transactional leadership behaviors measured by the MLQ are

contingent reward, active management by exception, passive management by exception, and laissez-faire. The reliabilities of these four dimensions were found by Gellis (2001) to be 0.74, 0.70, 0.75, and 0.84 respectively.

Marketing Effectiveness Questionnaire

In order to develop a valid and reliable measurement of marketing effectiveness for service firms, Webster (1995) has refined the framework of marketing effectiveness that was originally developed by Kotler (1977). With this study's focus on professional service firms, the marketing effectiveness questionnaire, as refined by Webster (1995), is an appropriate measurement for this present study. It consists of four dimensions – operational efficiency, customer philosophy, adequate marketing information, and strategic orientation. Leisen, Lilly, and Winsor (2002) recently have adopted this refined questionnaire to study the effects of organizational culture and marketing orientation on marketing effectiveness in the marketing alliance setting. They have found the reliabilities for these four dimensions to be 0.87, 0.82, 0.83, and 0.80 respectively. A five-point Likert scale, ranging from “strongly disagree” valued as a “1” to “strongly agree” valued as a “5,” was used.

Questionnaire of Knowledge Sharing in Strategic Alliance Setting

As mentioned earlier, there is a lack of empirical research studies on knowledge

sharing in strategic alliance settings. Therefore, developing a reliable questionnaire for this present study would be very important. Based upon prior research studies (Nonaka & Takeuchi, 1995; Davenport, Harris & Kohli, 2001; Lesser, Mundel & Wiecha, 2000; Gibbert, Leibold & Probst, 2002; Weiss, 1999; Haldin-Herrgard, 2000; Garcia-Murillo & Annabi, 2002), previous chapter organized them into knowledge-sharing activities. Studies on management practices (Inkpen, 1996, 1998; Nonaka, 1994; Lyles, 1988; Glickman, 2000; Gamal, 2002; Birkinshaw, 2001; Tsai, 2001; Lyles & Salk, 1996; Lam, 1997; Badaracco, 1991; Kuglin & Hook, 2001), were organized by the type of management practices the firms' managers typically used in the knowledge-based alliance. The new questionnaire that was developed was based on these knowledge sharing activities and practices (See Appendix A). It consists of 18 items to examine how companies implement the sharing of knowledge both within and between organizations in a strategic alliance setting. A five-point Likert scale, ranging from "strongly disagree" valued as a "1" to "strongly agree" valued as a "5," was used. A pilot test to establish the reliability was necessary for developing the new questionnaire. The pilot test that was conducted is described in a following section.

Demographic Questions

The demographic questions for this study consisted of gender, age, job level in the

organization, educational level, and tenure.

Pilot Test

To reduce research error and obtain a reliable result for this study, a pilot test was conducted. Bailey and Burch (2002) have suggested 10 steps for pilot testing a measurement system. These are: (1) conduct informal observations/note taking, (2) determine the approximate frequency, duration, or intensity of the behavior, (3) select the pilot observers and identify barriers to reliable observation, (4) identify location and details for observers, (5) develop response definitions and observation methods, (6) develop first draft of data sheet, (7) train observers, (8) try out data sheet and protocols, (9) revise as needed, and (10) retest data collection with reliability and modify as needed (p. 136). Bailey and Burch's 10 steps of pilot testing have been adopted as a referential guideline for this present study.

The pilot test study was mostly concerned with the knowledge sharing portion of the questionnaire because the other portions contained standard questions with established reliability. Based on Bailey and Burch's suggestion, the pilot test for this study was conducted by using the following five steps:

- (1) Develop a draft of the integrated questionnaire. As mentioned earlier, the knowledge sharing questions was developed from prior research studies. These

questions were combined with other standard questions on leadership and marketing effectiveness into an integrated questionnaire appropriate for this present study.

- (2) Select the participants of the pilot test. Given that the researcher's home town is in Taichung City, Taiwan, and the school attended is located in Fort Lauderdale, Florida, two large-sized accounting firms' with offices in each of these two areas were contacted to participate in the pilot study. In fact, most large-sized accounting firms have branch offices in these two areas because these areas are recognized as two of the major business centers in both Taiwan and the United States. Since a sample size larger than 30 has been considered a large sample (Mason & Lind, 1993), this study asked 30 knowledge workers in each location to participate in this pilot survey.
- (3) Distribute the questionnaires. Every office represented in the pilot test had a contact person who is a manager capable of handling this present survey in his/her organization. A description of the purpose of the study and instructions on how to distribute the questionnaire and complete the questionnaire were communicated to the contact person in each office by email. The contact person was asked to collect the pilot test questionnaires. A cover letter (See Appendix D), which describes the purpose of the study, was enclosed with the integrated questionnaire to each participant; the researcher's email address was provided for the purpose of feedback.

- (4) Revise and retest as needed. The need to revise this draft of the integrated questionnaire was determined based on feedback from the contact persons and participants. The draft questionnaire was not seriously revised, so it was determined that was not necessary.
- (5) Determine the reliability of the questionnaire: *Cronbach's alpha* has been suggested as the most commonly used index of reliability in the field of psychological research (Nunnally, 1979; Peter, 1979). Therefore, *Cronbach's alpha* was adopted to examine the reliability of this draft questionnaire.

Pilot Test Results

Several large-size accounting firms' offices located in Taichung City, Taiwan and Fort Lauderdale, Florida were contacted. Two offices in each of these two areas agreed to participate in this pilot study. Pilot surveys were sent to contact persons in each participating office. The response rate for the pilot study is shown in Table 6. Invalid responses were defined as those questionnaires with most questions left unanswered or those with identical responses to every question. Of the valid responses received, 83.3% were from Taichung, Taiwan and 53.3% were from Fort Lauderdale, Florida. In total, pilot surveys were distributed to 60 knowledge workers; 47 were returned, and 41 were found to be valid for a useable response rate of 68.3%. Additionally, Table 7 displays

characteristics of the respondents for the pilot test. Included are respondents' gender, age, educational level, job level, and tenure.

Table 6

Pilot Survey Responses			
Firms Location	Taichung	Fort Lauderdale	Total
Pilot surveys	30	30	60
Responses	30	17	47
Response rates	100.0%	56.6%	78.3%
Valid responses	25	16	41
Valid response rates	83.3%	53.3%	68.3%

Table 7

Demographics of Pilot Test's Valid Participation

Items	Respondents	Percentage	Items	Respondents	Percentage
Gender			Job level		
Male	17	41.5%	Senior		
Female	24	58.5%	manager	3	7.3%
Total	41	100.0%	Manager	8	19.5%
Age			Supervisor	15	36.6%
20 to 24	6	14.6%	Staff	14	34.1%
25 to 29	18	43.9%	Missing	1	2.4%
30 to 34	11	26.8%	Total	41	100.0%
35 to 39	2	4.9%	Tenure		
40 & Upper	4	9.8%	1 ~ 5 years	32	78.0%
Total	41	100.0%	6 ~ 10 years	6	14.6%
Education			11 ~ 15		
Associate	2	4.9%	years	1	2.4%
Bachelor	31	75.6%	16 ~ 20		
Master	7	17.1%	years	1	2.4%
Missing	1	2.4%	21 years &		
Total	41	100.0%	upper	1	2.4%
			Total	41	100.0%

The drafts of the integrated questionnaires, both Chinese and English versions were modified following this pilot study. The modifications were the result of feedback from the pilot study's contact persons and respondents. No items needed revisions in the sections on leadership behaviors and marketing effectiveness. In the section on knowledge sharing respondents were asked how their organizations implement the sharing of knowledge within the organizations and between strategic alliance organizations. The definition of strategic alliance was added for obtaining a better result.

Strategic alliance was defined as a voluntary arrangement between two or more firms to exchange, share, or co-develop products, technologies, and/or services (Gulati, 1998). It was explained that firms may have a wide range of goals or motives for joining a strategic alliance, and that these alliances can come in a variety of different forms, and occur across both vertical and horizontal boundaries.

Feedback also resulted in a question being added to the questionnaire that asked respondents to think of the strategic alliance organization that is most important to their organizations. Lastly, each item of the integrated questionnaire was re-read carefully to make sure the wording was accurate for the item being measured. The revised integrated questionnaires, both Chinese and English versions, are contained in Appendices A and B.

Chronbach's alpha was applied to measure the reliability of the draft questionnaire. Chronbach's alpha is used to measure internal consistency. Score ranges from 0 to 1, with values larger than 0.50 indicating a low level of acceptability (George & Mallery, 2001). For this pilot study, the internal consistency reliability (Chronbach's alpha) for the leadership behaviors of idealized influence attributed, idealized influence behavior, inspirational motivation, intellectual stimulation, individual consideration, contingent reward, active management by exception, passive management by exception, and

laissez-faire were 0.72, 0.67, 0.82, 0.74, 0.76, 0.63, 0.62, 0.76, and 0.77 respectively.

In terms of marketing effectiveness, the four dimensions (operational efficiency, customer philosophy, adequate marketing information, and strategic orientation) of internal consistency reliability (Chronbach's alpha) were 0.89, 0.81, 0.88, and 0.70 respectively. The internal consistency reliability (Chronbach's alpha) for knowledge sharing was 0.92. Generally, each subscale of the integrated questionnaire had a good internal consistency with Chronbach's alpha. Bass and Avolio (2000) obtained adequate convergent, as well as discriminant validity, for the constructs contained in their leadership instrument. Furthermore, Webster (1995) confirmed a content validity for the constructs contained in marketing effectiveness of the organization. Therefore, a retest of the integrated questionnaire was not necessary.

Nevertheless, it was necessary to confirm whether the variable of knowledge sharing in this study was like other variables, meaning multidimensional or unidimensional. To confirm this using factor analysis, the sample size must be 100 or larger (Hair, Anderson, Tatham, & Black, 1998). This confirmation will be discussed in the next chapter. Once the draft questionnaire was confirmed to be a reliable questionnaire for the present study, the formal data collection was conducted. The next sections discuss how the formal survey was conducted.

Population and Sample

The large-sized accounting firms – the member firms of the “Big Four Accounting Firms” in Taiwan and the top 20 accounting firms in the United States that are listed in Bowman’s 2003 top 100 accounting/consulting firms (Bowman, 2003) – were the population for this study. As mentioned earlier, the large-sized accounting firms in Taiwan have undertaken organizational mergers to build their competitive advantage. In order to expand their market globally, these firms have joined the network of “the Big Four Accounting Firms” to become the members of a strategic alliance. In the United States, the large-sized accounting firms have created strategic alliances with law firms and other types of service organizations to provide a “one-stop-shop” experience for their clients.

Sampling in Taiwan

The websites of Taiwan member firms of the “Big Four Accounting Firms,” reveal that these firms have established branch offices in four cities – Taipei, Hsinchu, Taichung, and Kaohsiung cities. Therefore, the offices of the large-size accounting firms located in these four cities and having the largest number of employees were selected as the sample for this study. A total of 16 offices that are located in these four cities were invited to participate in this study.

Sampling in the United States

A review of the websites of the top 20 accounting firms in the United States (Bowman, 2003), shows the firms with the largest number of branch offices throughout the U.S. The sample selected for the U.S. contained the branch offices of accounting firms in states with the largest number of offices for the firm. A total of 135 branch offices are located in states with the largest number of offices for the firm.

Method of Data Collection

Each office was personally contacted and asked to participate in the study. In Taiwan, 7 out of 16 branch offices agreed to participate in this study, and a total of 150 surveys were sent to these participating offices. In the U.S., 34 out of 135 branch offices agreed to participate in this study, and a total of 210 surveys were sent to these participating offices. A contact person was identified for each participating office.

The survey package, which contained the cover letters stating the purpose of the study (See Appendix E), stamped returned envelopes, and questionnaires were sent to the contact persons. The contact person of each participating firm received the survey packages in the mail, and information on distributing these questionnaires to his/her offices. Additionally, the contact person was asked to collect and return the questionnaires for the researcher. Upon completion, the contact person in each

participating office mailed the surveys directly to the addresses the researcher had provided in Taichung City or Florida.

Statistical Techniques

Descriptive statistics were used to ascertain (1) employees' perceptions of their managers' leadership behaviors, (2) how the surveyed participant firms implement the sharing of knowledge both within and between strategic alliance organizations, and (3) how the surveyed participant firms implement the four dimensions of marketing effectiveness (Webster, 1995). Additionally, descriptive statistics were applied to understand the demographics of the respondents. These descriptive statistics included frequency distribution, relative frequency distribution, sample mean, and sample standard deviation.

To confirm whether or not the collected data fit the theoretical constructs of transformational and transactional leadership behaviors and marketing effectiveness, the confirmatory factor analysis (CFA) technique was adopted. To confirm whether knowledge sharing is a variable with multidimensions or unidimensional, the exploratory factor analysis (EFA) technique was adopted. To study the relationships among leadership, knowledge sharing, and marketing effectiveness, Pearson's correlation analysis was adopted. A correlation matrix is provided to examine the relationships.

To answer the research questions of this present study, five research hypotheses were developed. Multiple regression analysis (Mason & Lind, 1993) and canonical correlation analysis (Thompson, 1984) were used to study the first three hypotheses that (1) transformational leadership is positively correlated with the sharing of knowledge; (2) transactional leadership is positively correlated with the sharing of knowledge; and (3) the sharing of knowledge is positively correlated with the marketing effectiveness of the organization. The fourth and fifth hypotheses were to study the mediating effect of knowledge sharing. This study followed Baron and Kenny's (1986) suggestion to determine if the effect of knowledge sharing has a significant result. Multiple regression analysis was also used.

Chapter Summary

In summary, this chapter has developed the methodology for studying the research questions and testing the resulting hypotheses. The research questions are: (1) How do the transformational and transactional leadership behaviors affect the sharing of knowledge in the strategic alliance setting? (2) How does knowledge sharing affect organizational marketing effectiveness in the strategic alliance setting? and (3) How do the transformational and transactional leadership behaviors affect the sharing of knowledge and, in turn, the marketing effectiveness of organizations in the strategic

alliance setting?

The research questions and hypotheses were based upon a review of the relevant literature. An integrated questionnaire combining the Multifactor Leadership Questionnaire (MLQ – 5X Short Form) (Bass & Avolio, 2000), Marketing Effectiveness Questionnaire (Webster, 1995), Questionnaire of Knowledge Sharing in the Strategic Alliance Setting, and demographic questions was developed specifically for this study. Additionally, this questionnaire was translated into Chinese to accommodate some of the respondents who are citizens of the Republic of China. To reduce research error, a pilot study was conducted. The result of the pilot study confirmed that the integrated questionnaire was a reliable questionnaire for this present study. Minor modifications to the questionnaire were performed to respond to the feedback received from respondents in the pilot study. Both Chinese and English versions of the questionnaire were prepared for the formal data collection.

The survey population consisted of the big four accounting firms in Taiwan and the top 20 accounting firms in the United States. In Taiwan, all four accounting firms have established branch offices in four cities – Taipei, Hsinchu, Taichung, and Kaohsiung cities. Surveys were sent to offices located in these four cities with the largest number of employees. For the U.S. accounting firms with numerous offices throughout the U.S.,

surveys were sent to as many offices as possible. Surveys were sent to offices in the states with the largest number of offices for the firm.

Lastly, statistical techniques, namely confirmatory factor analysis, exploratory factor analysis, Pearson's correlation analysis, multiple correlation analysis, and canonical correlation analysis were applied to answer the research questions and test the hypotheses. The next chapter provides the statistical results and findings.

CHAPTER IV

ANALYSIS AND PRESENTATION OF FINDINGS

Overview

Chapter I defined the research objective and questions, and the literature review in Chapter II supported this research effort. Chapter III developed the methodology to answer the research questions for this study. The research hypotheses deal specifically with the relationships among leadership behaviors, knowledge sharing, and marketing effectiveness in strategic alliance settings. An integrated questionnaire was developed for data collection after performing the pilot study. Since the accounting firm is one type of professional service firm, large-size accounting firms both in Taiwan and in the United States were invited to participate in this present study. Statistical techniques were specified to answer the research questions and test the hypotheses.

This chapter provides the statistical results and findings. It addresses data collection, demographics of the knowledge workers who participated, the confirmation of measurement, the development of the knowledge sharing construct, reliability testing, descriptive statistics and correlation analyses, and hypotheses testing.

Data Collection

Data collection involved a series of contacts that consisted of email, phone calls,

and face to face meetings over a two-month period. In Taiwan, 7 out of 16 branch offices agreed to participate in this study. A total of 150 surveys were sent to these participating offices, from which 98 were returned, and 93 were found to be valid for a usable response rate of 62.0%. In the United States, 34 out of 135 branch offices agreed to participate in this study. A total of 210 surveys were sent to these participating offices, in which 74 were returned, and 72 were found to be valid for a usable response rate of 34.3%. The overall surveys were distributed to 360 knowledge workers; 172 of them were returned, and 165 were found to be valid for a usable response rate of 45.8%. Invalid responses were defined as those questionnaires with questions left unanswered or those with identical responses to every question. Invalid responses were excluded from the analyses. Table 8 displays the statistical results of the survey responses.

Table 8

Survey Responses			
Location	Taiwan	U.S.	Total
Sample size (a)	150	210	360
Responses (b)	98	74	172
Response rates (c)= (b) / (a)	65.3%	35.2%	47.8%
Valid responses (d)	93	72	165
Invalid responses	5	2	7
Valid response rates (e) = (d) / (a)	62.0%	34.3%	45.8%

Demographics of Participating Characteristics

Demographic information was obtained from 41 accounting offices participating in this study. This information provided characteristics of large-size firms both in Taiwan and in the United States. Table 9 reveals the overall characteristics of valid respondents. Included are respondents' gender, age, educational level, job level in the organization, and tenure. Demographic classifications were identified as follows.

Gender

The majority of respondents for this study were female both in Taiwan and in the United States, accounting for 60.2% and 62.5% of respondents respectively. Overall, 38.8% of respondents were male and 61.2% of respondents were female.

Age

Respondents were asked to identify their age. A frequency distribution technique was used in which age was grouped into five categories: 20 ~ 24 years old, 25 ~ 29 years old, 30 ~ 34 years old, 35 ~ 39 years old, and 40 years old and over. In Taiwan, the majority of accounting professionals were between 25 to 29 years old, accounting for 47.3% of the respondents. In the United States, most accounting professionals were between the age of 25 and 40 plus, accounting for 83.40% of respondents. Overall, 9.1% of respondents were between 20 and 24 years old; 38.2% of respondents were

between 25 and 29 years old; 27.3% of respondents were between 30 and 34 years old; 9.1% of respondents were between 35 and 39 years old; and 16.4% of respondents were 40 years old and over.

Educational Level

Respondents were asked to identify the highest educational degree they had received. Choices were: associate degree, bachelor degree, and master's degree. In Taiwan, the majority of respondents had received bachelor degrees, accounting for 76.3%. In the United States, the majority of respondents also had received bachelor degrees, accounting for 69.4%. Overall, the distribution of total respondents was as follows: 7.3% associate degree, 73.3% bachelor degree, and 19.4% master's degree.

Job Level in Organization

The majority of respondents for this study were at the entry and middle levels. In Taiwan, the majority of respondents was in a supervisory or staff position, accounting for 44.1% and 32.3% respectively. In the United States, the majority of respondents were in a staff position, accounting for 47.2%. Overall, 13.3% of respondents were senior manager level; 17.6% of respondents were manager level; 30.3% of respondents were supervisor level; and 38.8% of respondents were staff level.

Tenure

Using a frequency distribution technique, tenure was grouped into five categories: 1 ~ 5 years, 6 ~ 10 years, 11 ~ 15 years, 16 ~ 20 years, and 21 years and over. Of the respondents from Taiwan, 78.5% had been working at the firm anywhere from 1 to 5 years. Of the respondents from the United States, 62.5% had been working at the firm anywhere from 1 to 5 years. Overall, 71.5% of respondents had worked at their firms between 1 and 5 years; 20.0% from between 6 and 10 years; 5.5% from between 11 and 15 years; 2.4% from between 16 and 20 years; and 0.6% from 21 years and over.

Table 9

Demographics of Valid Participation – Taiwan

Items	Respondents	Percentage
Gender		
Male	37	39.8%
Female	56	60.2%
Total valid responses	93	100.0%
Age		
20 ~ 24	11	11.8%
25 ~ 29	44	47.3%
30 ~ 34	26	28.0%
35 ~ 39	7	7.5%
40 & Over	5	5.4%
Total valid responses	93	100.0%
Educational level		
Associate	4	4.3%
Bachelor	71	76.3%
Master's	18	19.4%
Total valid responses	93	100.0%
Job level in the organization		
Senior manager	7	7.5%
Manager	15	16.1%
Supervisor	41	44.1%
Staff	30	32.3%
Total valid responses	93	100.0%
Tenure		
1 ~ 5 Years	73	78.5%
6 ~ 10 Years	16	17.2%
11 ~ 15 Years	4	4.3%
16 ~ 20 Years	0	0.0%
21 & Years over	0	0.0%
Total valid responses	93	100.0%

Table 10

Demographics of Valid Participation – the United States

Items	Respondents	Percentage
Gender		
Male	27	37.5%
Female	45	62.5%
Total valid responses	72	100.0%
Age		
20 ~ 24	4	5.6%
25 ~ 29	19	26.4%
30 ~ 34	19	26.4%
35 ~ 39	8	11.1%
40 & Over	22	30.6%
Total valid responses	72	100.0%
Educational level		
Associate	8	11.1%
Bachelor	50	69.4%
Master's	14	19.4%
Total valid responses	72	100.0%
Job level in the organization		
Senior manager	15	20.8%
Manager	14	19.4%
Supervisor	9	12.5%
Staff	34	47.2%
Total valid responses	72	100.0%
Tenure		
1 ~ 5 Years	45	62.5%
6 ~ 10 Years	17	23.6%
11 ~ 15 Years	5	6.9%
16 ~ 20 Years	4	5.6%
21 & Years over	1	1.4%
Total valid responses	72	100.0%

Table 11

Demographics of All Valid Participation

Items	Respondents	Percentage
Gender		
Male	64	38.8%
Female	101	61.2%
Total valid responses	165	100.0%
Age		
20 ~ 24	15	9.1%
25 ~ 29	63	38.2%
30 ~ 34	45	27.3%
35 ~ 39	15	9.1%
40 & Over	27	16.4%
Total valid responses	165	100.0%
Educational level		
Associate	12	7.3%
Bachelor	121	73.3%
Master's	32	19.4%
Total valid responses	165	100.0%
Job level in the organization		
Senior manager	22	13.3%
Manager	29	17.6%
Supervisor	50	30.3%
Staff	64	38.8%
Total valid responses	165	100.0%
Tenure		
1 ~ 5 Years	118	71.5%
6 ~ 10 Years	33	20.0%
11 ~ 15 Years	9	5.5%
16 ~ 20 Years	4	2.4%
21 & Years over	1	0.6%
Total valid responses	165	100.0%

The Confirmation of Measurements

Before conducting the statistical techniques, i.e., multiple regression analysis and canonical correlation analysis to examine the research hypotheses, it is important to confirm whether the collected data are appropriate (fit) for the hypothesized model (proposed measurement) of the present study. MLQ – 5X (Bass & Avolio, 2000) and marketing effectiveness (Webster, 1995) are two measurements that have adopted for this present study. To confirm whether the measurement of MLQ – 5X and marketing effectiveness are appropriate for the study, confirmatory factor analysis (CFA) was conducted. The main difference between exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) is the timing of the analysis. The theory and theoretical factors are the productions of EFA. Using the data from empirical study, an exploratory factor analysis is performed, and the results are compared with prior research findings to define the theory and theoretical factors. CFA, on the other hand, involves using a particular data set to confirm what is theoretically believed.

The CFA technique has been widely used for testing the psychometric properties of measurement instruments because it tests a pre-specified factor structure and the goodness of fit of the resulting solution (Anderson & Gerbing, 1988; Bobko, 1990; Bagozzi, Yi, & Phillips, 1991; Kenny & Kashy, 1992). CFA is one application of

structural equation modeling. By employing a structural equation modeling technique using Linear Structural Relationship (LISREL) (Joreskog & Sorbom, 2000), hypotheses can be tested against a set of data for their empirical fit. Once relationships between and among observed and latent variables are theorized, CFA is utilized to test the degree to which the theory holds up against empirical data. In this case, higher-order confirmatory factor analysis was conducted. When the observed variables (factors) are affected by latent variables (factors), the latent factors are called first-order factors. Additionally, when the latent variables are affected by another factor (higher factor), the higher factor is called a higher-order factor. Lastly, when confirmatory factor analysis has been conducted to analyze higher-order factors, it is called higher-order confirmatory factor analysis.

A key question in this process is whether the collected data provide any indications that the hypothesized structure should be rejected (data-model misfit), or whether there is empirical evidence to suggest that the model, as specified, might be a viable representation of true relationships between observed and latent variables. LISREL has contributed to producing fit indices to help researchers to determine the degree of goodness of fit of the substantive model with the available data. LISREL, therefore, evaluates whether or not the unrestricted population variance/covariance matrix of the

observed variables Σ is equal to the model-implied variance/covariance matrix $\Sigma(\theta)$, i.e., it tests the null hypothesis $H_0: \Sigma = \Sigma(\theta)$. If the specified model is correct, then H_0 is true. Many overall measures of data-model fit have been suggested in the literature, in an attempt to give the user a single criterion by which to judge whether or not a particular data set is consistent with a prior hypothesized model. Perhaps the most commonly used indices in the applied literature are: (1) the chi-square statistic, (2) the ratio of chi-square and degree of freedom (χ^2/df), (3) the goodness-of-fit and adjusted goodness-of-fit indices (GFI & AGFI), (4) the normed and nonnormed fit indices (NFI & NNFI), (5) the incremental fit index (IFI), (6) the root mean square error of approximation (RMSEA), (7) the comparative fit index (CFI), (8) the root mean square residual and standardized root mean square residual (RMR & SRMR). The following table provides the evaluating criteria for these indices. The purpose of this section is to confirm whether the collected data fit the theoretical measurement of transformational and transactional leadership behaviors and marketing effectiveness. These criteria, therefore, were used to confirm the data-model fit.

Table 12

The Criteria of Data-Model Fit Indices

Name of Indices	Descriptions & Criteria
Chi-square statistic	χ^2 is not significant when p value larger than 0.05.
χ^2/df	The smaller value of the ratio of chi-square and degree of freedom, the higher degree of data-model fit. Mclver and Carmines (1981) suggested that when χ^2/df is smaller than 2, the result indicates a good model fit.
GFI	Both GFI and AGFI are used to determine the amount of observed variance/covariance information that can be accounted for by the hypothesized model. Tanaka (1993) remarked that both GFI and AGFI are similar to the coefficient of multiple determination R^2 and its adjusted version adjusted R^2 . Both indices range from 0 to 1, with a value larger than 0.9 indicating a good model fit (Byrne, 1998).
AGFI	
NFI	In the discussion of the fit indices NFI and NNFI, Bentler and Bonett (1980) conceptualized the fit issue in a model-comparative sense by assessing the data-model fit of a hypothesized structure, say M_h in comparison to a more restricted baseline model, say M_j . While any substantively reasonable model M_j could serve as a baseline (as long as it is nested within the hypothesized model M_h), it is usual practice to choose the independence model M_j as the standard for comparison. The NFI ranges from 0 to 1, with larger values indicating a better data-model fit. One disadvantage of the NFI is that it is affected by sample size and might not equal 1 even if the hypothesized model is correct (Bentler, 1990). To rectify this problem, Benter and Bonett (1980) extended the work of Tucker and Lewis (1973) and proposed NNFI. Hu and Bentler (1995), however, suggested both indices should be larger than 0.90 to indicate a good model fit.
NNFI	

Table 12

The Criteria of Data-Model Fit Indices (Continue)

Name of Indices	Descriptions & Criteria
CFI	Bentler (1990) proposed CFI to solve the major problem of NFI, i.e., NFI often underestimates data-model fit. Index ranges from 0 to 1, with value 0.95 indicative of good overall data-model fit (Bentler, 1995).
IFI	Bollen (1989) noticed that NFI (Bentler & Bonett, 1980) had been insensitive to model complexity and overly dependent on sample size. Thus, he incorporated the number of free parameters in the model, represented by the degrees of freedom associated, and the sample size into the NFI, creating a new IFI. Tallon, Kraemer, Gurbaxani, & Mooney (1997) advocate an IFI greater than 0.95 for the model to be satisfactorily representing the data.
RMSEA	Byrne (1998) claims that RMSEA is one of the most instructive criteria in theoretical model testing. This model fit measure gauges the degree to which the theoretical model deviates from the same model with optimally chosen parameter values. The extent to which the theoretical model deviates from a parallel model with ideal parameters is conveyed in per degrees of freedom. McDonald and Ho (2002) suggested that the value of 0.08 is an acceptable good model, with values less than 0.05 signifying a good overall data-model fit.
RMR	The RMR is a measurement of the average residual from fitting the theoretical model to the sample covariance matrix. The smaller the average standardized residual size, the better the model fits the data.
SRMR	The SRMR measure represents the average quality across the inter-correlation residuals. A SRMR value less than 0.05 indicates a well-fitting model, with the range of possible values for the SRMR being from 0 to 1 (Byrne, 1998).

Transformational Leadership Behavior Measurement Confirmation

Transformational leadership in the MLQ – 5X Short Form (Bass & Avolio, 2000) consists of five factors, i.e., idealized influence attributed, idealized influence behavior, inspirational motivation, intellectual stimulation, and individual consideration leadership. Each factor consists of four items to describe its leadership behaviors. Higher-order confirmatory factor analysis was used to confirm whether the collected data fit the measurement of transformational leadership in the MLQ – 5X Short Form. Appendix F displays a higher-order confirmatory factor model of transformational leadership. In this case, the higher-order factor was transformational leadership; the first-order factors were idealized influence attributed, idealized influence behavior, inspirational motivation, intellectual stimulation, and individual consideration leadership; and the observed variables were the 20 items.

LISREL 8.5 defaults to the maximum likelihood fitting function for estimating a model's parameters (Joreskog & Sorbom, 2000). Maximum likelihood generates an estimated chi-square statistic, and, as such, provides a probability value indicative of overall fit of the model since the distribution of chi-square value is known (Bollen, 1989). With a chi-square value χ^2 (n=165), 358.25, p=0.00, i.e., a significant statistical value, this study rejected the null hypothesis, $s = \Sigma (\theta)$. This construct of transformational

leadership, with a five-factor model, was not supported by the collected data of this study; nevertheless, the chi-square test is a very rigorous standard for model fit testing. The ratio of chi-square and degree of freedom (χ^2/df) was found to be $165/358.25 = 2.17$; however, the value of 2.17 approaches the suggested value of 2.

Indices of GFI, AGFI, and NFI were found to be 0.82, 0.77, and 0.80 respectively.

These indices, however, failed to meet the suggested value of 0.90. NNFI was found to have a value of 0.87. This index tended to approach the suggested value of 0.90. RMSEA was found to be 0.085; this value was close to the suggested value of 0.08. CFI was found to have a value of 0.88, which is below the suggested value of 0.95. IFI was found to be 0.89, falling short of the suggested guideline of a value greater than 0.95 to satisfactorily represent the data. Moreover, both RMR and SRMR were found to be 0.054 and 0.058 respectively. Both indices tended to approach the suggested value of 0.05.

With ample evidence, the collected data failed to fit the transformational leadership behaviors of the five-factor model. Hence, exploratory factor analysis would need to be performed to produce the new factors based on the presently collected data and prior literature review. With factor analysis, the research can first identify the separate dimensions of the structure and then determine the extent to which each variable is

explained by each dimension. Once these dimensions and the explanation of each variable are determined, the two primary uses for factor analysis – summarization and data reduction – can be achieved.

Exploratory Factor Analysis of Transformational Leadership Behaviors

To conduct exploratory factor analysis, this study was guided by the following method to explore the factors for further analysis.

- (1) Kaiser-Meyer-Olkin measure of sampling: To measure whether the distribution of values is adequate for conducting factor analysis, Kaiser (1974) designated the levels as follows. A measure > 0.9 is marvelous, > 0.8 is meritorious, > 0.7 is middling, > 0.6 is mediocre, > 0.5 is miserable, and < 0.5 unacceptable.
- (2) Bartlett test of sphericity: To measure whether the correlation matrix of collected data is an identity matrix. A significance value smaller than 0.05 indicates that collected data do not produce an identity matrix and is thus acceptable for factor analysis (George & Mallery, 2001).
- (3) Factor extraction: The most frequent factor extraction method is principle component analysis that considers the total variance and derives factors that contain small proportions of unique variance and, in some instances, error variance.
- (4) Determining the number of factors: One of the most widely useful criteria for

determining the number of factors evident in a construct is eigenvalue. The eigenvalue is the proportion of variance explained by the factors. The value has to be larger than 1 to be considered a factor (George & Mallery, 2001).

- (5) Factor rotation: One of the most widely useful methods in rotation of factors is varimax. The varimax method maximizes the sum of variances of required loadings of the factor matrix (Hair, Anderson, Tatham, & Black, 1998).
- (6) Factor loading: After factor rotation, a decision must be made regarding which factor loadings are worth considering. In short, factor loadings greater than ± 0.30 are considered to meet the minimal level; loadings of ± 0.40 are considered more important; and if the loadings are ± 0.50 or greater, they are considered practically significant. These guidelines are applicable when the sample size is 100 or larger (Hair, Anderson, Tatham, & Black, 1998). Additionally, the difference between two factors of factors loading has to be larger than 0.30, but the difference between the two factors may be lower than 0.30 when an empirical study is being conducted (Wu & Lin, 2001).

Twenty items pertaining to the transformational leadership behaviors are included in the MLQ – 5X Short Form. With a sample size of 165 knowledge workers, factor analysis in SPSS 11.5 was performed to explore the number of factors based on the

collected data. Additionally, the items belonging to their specific factors were revealed. The collected data were found to be adequate for conducting factor analysis as the value of KMO was 0.927. The Bartlett's test revealed a significant value of 0.00, which is smaller than 0.05 and thus indicates that the collected data are acceptable for factor analysis.

Exploratory factor analysis output revealed four factors that had eigenvalues greater than 1. The first factor had an eigenvalue of 9.063 and explained 45.315% of the variance. The second factor had an eigenvalue of 1.251 and explained 6.253% of the variance. The third factor had an eigenvalue of 1.129 and explained 5.645% of the variance. The fourth factor had an eigenvalue of 1.053 and explained 5.265% of the variance. There were 7, 5, 3, and 1 indicators loaded onto the first, second, third, and fourth factors respectively. The following table displays the factor loading, items, and theorized dimension.

Table 13

Items Constituting the Factors of the Exploratory Factor Analysis – Transformational Leadership

Factor	Items	Factor Loading	Theorized Dimension
1	Gets me to look at problems from many different angles.	0.748	IS
	Helps me to develop my strengths.	0.735	IC
	Suggests new ways of looking at how to complete assignments.	0.687	IS
	Specifies the importance of having a strong sense of purpose.	0.687	IIB
	Spends time teaching and coaching.	0.687	IC
	Expresses confidence that goals will be achieved.	0.657	IM
	Considers me as having different needs, abilities and aspirations from others.	0.553	IC
2	Articulates a compelling vision of the future.	0.772	IM
	Talks optimistically about the future.	0.634	IM
	Talks enthusiastically about what needs to be accomplished.	0.615	IM
	Displays a sense of power and confidence.	0.582	IIA
	Talks about their most important values and beliefs.	0.564	IM
3	Treats me as an individual rather than just as a member of a group.	0.723	IC
	Acts in ways that build my respect.	0.718	IIA
	Considers the moral and ethical consequences of decisions.	0.503	IIB
4	Seeks differing perspectives when solving problems.	0.681	IS

Note: Intellectual stimulation (IS), individual consideration (IC), idealized influence behavior (IIB), inspirational motivation (IM), idealized influence attributed (IIA)

Table 14

Correlation Matrix of Transformational Leadership with a Four-Factor Model

	TF1	TF2	TF3	TF4
TF1				
TF2	.669**			
TF3	.668**	.599**		
TF4	.459**	.440**	.346**	

Note: TF: Transformational leadership, ** Correlation is significant at the 0.01 level

The results of exploratory factor analysis were found not to match with the theorized dimensions of transformational leadership (Bass & Avolio, 2000), except with regard to the inspirational motivation dimension. These results were true as the results of confirmatory factor analysis showed that the collected data failed to fit the transformational leadership behaviors of the five-factor model. Bass and Avolio (2000) recognized that the dimensions theoretically supporting the construct have not been consistently realized in research and when they have been, their inter-correlations are extremely high. Additionally, Bycio, Hackett, and Allen (1995) found that the dimensions failed to exhibit discriminant validity in predicting outcomes. To conduct the correlation analysis among these four factors, Table 14 shows these factors were significantly and positively correlated with each other. This study, therefore, averaged the 16 items to create a single index tapping transformational leadership and used this index in further statistical analysis.

Transactional Leadership Behaviors Measurement Confirmation

Transactional leadership in the MLQ – 5X Short Form (Bass & Avolio, 2000) consists of four factors, i.e., contingent reward, management by exception active, management by exception passive, and laissez-faire leadership. Each factor consists of four items to describe its leadership behaviors. A high-order confirmatory factor was used to confirm whether the collected data fit the measurement of transactional leadership in the MLQ – 5X Short Form. Appendix G displays a high-order confirmatory factor model of transactional leadership. In this case, the high-order factor was transactional leadership; the first-order factors were contingent reward, management by exception active, management by exception passive, and laissez-faire leadership; and the observed variables were those 16 items.

LISREL 8.5 defaults to a maximum likelihood fitting function for estimating a model's parameters (Joreskog & Sorbom, 2000). The results of goodness of fit statistics showed a chi-square value of χ^2 (n=165), 171.84, p=0.00. Since this value is statistically significant the null hypothesis, $s = \Sigma (\theta)$ was rejected. The collected data, therefore, failed to support the construct of transactional leadership of the four-factor model. As mentioned earlier, however, the chi-square test is a very rigorous standard for model fit testing. The ratio of chi-square and degree of freedom (χ^2/df) was found to

be $171.84/100 = 1.718$; however, the value of 1.718 was smaller than the suggested value of 2, so the result indicated a good data-model fit.

Indices of GFI, AGFI, NFI, and NNFI were found to be 0.88, 0.84, 0.77, and 0.87 respectively. These indices, however, were tended to approach the suggested value of 0.90. RMSEA was found to have a value of 0.06, meaning the result meets the suggested guideline; therefore, this result signifies a good data-model fit. Both CFI and IFI were found to have the same value of 0.89; these results failed to meet the suggested value of 0.95. Moreover, both RMR and SRMR were found to be 0.082 and 0.085 respectively. Both of these indices tended to approach the suggested guideline, with a value less than 0.05, indicating a well fitting model.

For this study, the results of goodness of fit statistics, as mentioned above, revealed the construct of transactional leadership of the four-factor model to be moderately supported by the collected data. The evidence showed that both (χ^2/df) and RMSEA meet the suggested value and the other indices come close to meeting their suggested values. Consequently, to achieve a good data-model fit, this study would need to find which items were not appropriate based upon the collected data. To do this, an exploratory factor analysis would need to be performed in order to obtain reliable results.

Exploratory Factor Analysis of Transactional Leadership Behaviors

Sixteen items related to transactional leadership behaviors are included in the MLQ – 5X Short Form. With a sample size of 165 knowledge workers, factor analysis in SPSS 11.5 was performed to explore the number of factors based on the collected data. Additionally, the items belonging to their specific factors were revealed. This study followed the guideline mentioned above to explore the factors and each of their associated items for further analysis.

In this case, the value of KMO was found to be 0.813; Kaiser (1974) called this value “meritorious” for conducting factor analysis. Additionally, the value of the Bartlett test was found to have a p-value of 0.00. This result, therefore, indicated an acceptable level for factor analysis. Using the principle component analysis and the criteria for eigenvalue, four factors were revealed in this case. The first factor had an eigenvalue of 4.152 and explained 25.949% of the variance. The second factor had an eigenvalue of 2.163 and explained 13.522% of the variance. The third factor had an eigenvalue of 1.768 and explained 11.049% of the variance. The fourth factor had an eigenvalue of 1.072 and explained 6.697% of the variance.

Using the varimax method and the criteria for factor loading, the items associated with each dimension were determined. Table 15 displays the items, factor loading, and

theoretical dimensions. Generally, the results of exploratory factor analysis for transactional leadership behaviors match the theoretical dimensions. This result was found to be true as the confirmatory factor analysis determined that the collected data moderately fit the transactional leadership behaviors of the four-factor model. Only management-by-exception passive and laissez-faire leadership were found to have items that had factor loadings that were not acceptable. For management-by exception passive leadership, items 12 and 20 had the differences between two factors of factor loadings that were smaller than 0.30. For laissez-faire leadership, item 5 had a small loading value of less than 0.50. Therefore, these items were deleted from the MLQ – 5X short form. The factors and items, which were adopted as the dimensions of transactional leadership behaviors for this study are displayed in Table 15.

Table 15

Items Constituting the Factors of the Exploratory Factor Analysis – Transactional Leadership

Factor	Items	Factor Loading	Theorized Dimension
1	Makes clear what one can expect to receive when performance goals are achieved.	0.754	CR
	Expresses satisfaction when I meet expectations.	0.732	CR
	Discusses in specific terms who is responsible for achieving performance targets.	0.700	CR
	Provides me with assistance in exchange for my efforts.	0.687	CR

Table 15

Items Constituting the Factors of the Exploratory Factor Analysis – Transactional Leadership (Continue)

Factor	Items	Factor Loading	Theorized Dimension
2	Fails to interfere until problems become serious.	0.762	MBEP
	Shows that he/she is a firm believer in “If it ain’t broke, don’t fix it.”	0.731	MBEP
3	Delays responding to urgent questions.	0.802	LF
	Avoids making decisions.	0.626	LF
	Is absent when needed.	0.581	LF
4	Keeps track of all mistakes.	0.775	MBEA
	Focuses attention on irregularities, mistakes, exceptions and deviations from standards.	0.677	MBEA
	Concentrates his/her full attention on dealing with mistakes, complaints and failures.	0.669	MBEA
	Directs my attention toward failures to meet standards.	0.649	MBEA

Note: Contingent reward (CR), management by exception active (MBEA), management by exception passive (MBEP), and laissez-faire (LF)

Marketing Effectiveness Measurement Confirmation

The measurement of marketing effectiveness (Webster, 1995) consisted of four factors, i.e., operational efficiency, customer philosophy, adequate marketing information, and strategic orientation. Eighteen items are associated with their specific factors in the construct of the marketing effectiveness. The high-order confirmatory factor was used to confirm whether the collected data fit the measurement of marketing effectiveness. Appendix H displays a high-order confirmatory factor model of marketing effectiveness.

In this case, the high-order factor was marketing effectiveness; the first-order factors were operational efficiency, customer philosophy, adequate marketing information, and strategic orientation; and the observed variables were the 18 items.

LISREL 8.5 defaults to a maximum likelihood fitting function for estimating a model's parameters (Joreskog & Sorbom, 2000). The results of goodness of fit statistics showed a chi-square value of χ^2 (n=165), 318.91, p=0.00, i.e., a statistically significant value; this study, therefore, rejected the null hypothesis, $s = \Sigma (\theta)$. The collected data, therefore, failed to support the construct of marketing effectiveness of the four-factor model. As mentioned above, however, the chi-square test is a very rigorous standard for model fit testing. The ratio of chi-square and degree of freedom (χ^2/df) was found to be $318.91/131 = 2.434$; however, the value of 2.434 was found to approach the suggested value of 2.

Indices of GFI, AGFI, and NFI were found to be 0.82, 0.77, and 0.84 respectively. These indices, however, were found to fail the suggested value of 0.90. NNFI was found to have a value of 0.88. This index approached the suggested value of 0.90. RMSEA was found to have a value of 0.094, which, in this case, approached the acceptable value of 0.08. Both CFI and IFI were found to have same value of 0.90; however, these results approached the suggested value of 0.95. Moreover, both RMR

and SRMR were found to be 0.044 and 0.060 respectively. The index of RMR was found to meet the suggested value of less than 0.05; whereas, the SRMR index just approached the suggested value.

With ample evidence, the collected data failed to fit the construct of marketing effectiveness of the four-factor model. Hence, exploratory factor analysis needed to be performed to produce the new factors based on the collected data and prior literature review.

Exploratory Factor Analysis of Marketing Effectiveness

Eighteen items are included in the measurement of marketing effectiveness (Webster, 1995). With a sample size of 165 knowledge workers, factor analysis in SPSS 11.5 was performed to explore the number of factors based on the collected data. Additionally, the items associated with specific factors were revealed. This study followed the guideline mentioned previously to explore the factors and each of their associated items for further analysis.

In this case, the value of KMO was found to be 0.934; Kaiser (1974) called this value “marvelous” for conducting factor analysis. Additionally, the value of the Bartlett test was found to have a p-value of 0.00; this result, therefore, indicated an acceptable level for factor analysis. Using the principle component analysis and the criteria for

eigenvalue, two factors were extracted in this case. The first factor had an eigenvalue of 9.227 and explained 51.263% of the variance. The second factor had an eigenvalue of 1.468 and explained 8.158% of the variance. Using the varimax method and the criteria for factor loading, the items associated with each dimension were determined.

Generally, the results of exploratory factor analysis were found to meet with Leisen, Lilly, and Winsor's interpretation of Webster's definition of marketing effectiveness. They defined the dimensions of operational efficiency and customer philosophy to be internal and external marketing effectiveness respectively. The dimensions of adequate marketing information and strategic orientation were classified as a mix of internal and external marketing effectiveness. In this case, two factors were extracted and defined as internal and external marketing effectiveness. Fourteen out of 18 items were extracted and allocated to their specific dimensions.

Items 7, 8, 13, and 14 were deleted since they either had factor loadings smaller than 0.50 or had factor loading difference between two factors lower than 0.30. Items 1 through 6 were found to have the same dimension of operational efficiency as found in Webster's research. According to Leisen, Lilly, and Winsor's (2002) definition, these items are included in the dimension of internal marketing effectiveness. Items 15 and 17 are included in the dimension of internal marketing effectiveness because these items

tend to be more focused on organization's internal marketing strategies. Items 9, 10, and 11 were found to have the same dimension of customer philosophy as found in Webster's research. According to Leisen, Lilly, and Winsor's (2002) definition, these items are included in the dimension of external marketing effectiveness. Items 16, 18 and 12 are included in the dimension of external marketing effectiveness because these items tend to be focused on the organization's external marketing strategies. Table 16 summarizes the results of the exploratory factor analysis for organization's marketing effectiveness.

Table 16

Items Constituting the Factors of the Exploratory Factor Analysis – Marketing Effectiveness

Factor	Items	Factor Loading	Theorized Dimension
1	My organization's marketing thinking is successfully communicated and implemented from the top down.	0.805	OE
	Management commits to marketing excellence.	0.770	OE
	Management is doing an effective job and the marketing resources are adequate and are deployed efficiently.	0.767	OE
	Management shows good capacity to react quickly and effectively to on-the-spot developments.	0.742	OE
	Marketing management is working well with the management in other functional areas.	0.739	OE
	The current marketing strategy is clear and innovative.	0.706	SO

Table 16

Items Constituting the Factors of the Exploratory Factor Analysis – Marketing Effectiveness (Continue)

Factor	Items	Factor Loading	Theorized Dimension
1	Management's focus on the organization is to be a good community neighbor.	0.691	OE
	My organization develops a detailed annual marketing plan and a careful long-range plan that is updated annually.	0.653	AMI
2	My organization monitors customer satisfaction.	0.809	CP
	My organization stimulates and monitors word-of-mouth communication.	0.718	CP
	My organization defines and communicates well the business to target customers.	0.701	SO
	My organization focuses on long-term growth.	0.651	SO
	Management takes a whole marketing system view (consists of competitors, customers, and environment) in planning business.	0.630	CP
	My organization contributes substantial effort to measure the cost-effectiveness of different marketing expenditures.	0.624	AMI

Note: Operational efficiency (OE), customer philosophy (CP), adequate marketing information (AMI), and strategic orientation (SO).

The Development of Knowledge Sharing Construct

Given the concept of knowledge management and its emphasis on knowledge sharing, this study broadly defines knowledge sharing in the strategic alliance setting as activities that involve gathering, absorbing, and/or transferring product and/or service information between organizations and customers, alliance partners, and/or employees.

It takes this information and then develops the information into organizational knowledge. This knowledge can be used to meet the organization's goals and strategies for success. It also helps the organization gain a competitive advantage in the marketplace. The measurement of knowledge sharing has been developed based upon prior research studies (See chapter II). Additionally, this measurement was adopted to be a part of the integrated questionnaire for this present study (See chapter III). In this case, the construct of knowledge sharing needed to be developed for the statistical analysis. Based upon the collected data, an exploratory factor analysis was performed. The guideline for conducting the factor analysis was the same as that mentioned above.

Based upon prior research studies, 18 items were developed to examine how accounting firms of this study implement the sharing of knowledge both within and between organizations in the strategic alliance settings. With a sample size of 165 knowledge workers, factor analysis in SPSS 11.5 was performed to explore the number of factors based on the collected data. Additionally, the items associated with their specific factors were revealed.

In this case, the value of KMO was found to be 0.913; Kaiser (1974) called this value "marvelous" for conducting factor analysis. Additionally, the value of the Bartlett test was found to have a p-value of 0.00; this result, therefore, was acceptable for factor

analysis. Using the principle component analysis and the criteria for eigenvalue, four factors were extracted in this case. The first factor had an eigenvalue of 8.334 and explained 46.301% of the variance. The second factor had an eigenvalue of 1.367 and explained 7.596% of the variance. The third factor had an eigenvalue of 1.166 and explained 6.477% of the variance. The fourth factor had an eigenvalue of 1.063 and explained 5.908% of the variance. Using the varimax method and the criteria for factor loading, the items associated with each specific dimension were determined. Fourteen out of 18 items were extracted and categorized by their specific factor. Table 17 displays the items, factor loading, and defined theoretical dimensions.

Table 17

Items Constituting the Factors of the Exploratory Factor Analysis – Knowledge Sharing

Factor	Items	Factor Loading	Theorized Dimension
1	My organization encourages employees to share their working experiences, such as their experiences in interacting with customers.	0.772	Internal KS S
	My organization's leadership supports the activities related to knowledge sharing.	0.733	Internal KS S
	My organization transfers employees' working experiences into "resources" that can be used by employees.	0.727	Internal KS S
	My organization encourages employees to work together and share knowledge with our strategic alliance partners.	0.694	Internal KS S

Table 17

Items Constituting the Factors of the Exploratory Factor Analysis – Knowledge Sharing
(Continue)

Factor	Items	Factor Loading	Theorized Dimension
1	My organization has job training programs, conferences, or internal consulting for the purpose of knowledge transferring and sharing.	0.604	Internal KS S
2	My organization and strategic alliance partners have visited each regularly for the purpose of knowledge sharing and learning.	0.807	External KS SAO
	My organization regularly conducts meetings with strategic alliance partners for the purpose of communication and knowledge developing and sharing.	0.780	External KS SAO
	My organization and strategic alliance partners create a “community” that allows strategic alliance members to share and create knowledge.	0.779	External KS SAO
	In order to develop competitive products or services, my organization creates and shares knowledge with strategic alliance partners.	0.666	External KS SAO
3	My organization develops enough appropriate repositories for knowledge collection.	0.826	Internal KS TS
	My organization creates techniques for collecting and sharing the knowledge from customers and strategic alliance partners.	0.621	Internal KS TS
	My organization creates a process for managing customer data and translating data into knowledge.	0.591	Internal KS TS

Table 17

Items Constituting the Factors of the Exploratory Factor Analysis – Knowledge Sharing
(Continue)

Factor	Items	Factor Loading	Theorized Dimension
4	My organization focuses on the most valued customers and captures the knowledge from interactions (or “socialization”) with customers.	0.830	External KS C
	My organization creates a workplace culture that is moving toward the customer-centric.	0.565	External KS C

Note: The strategies of internal organization knowledge sharing (Internal KS S), external organization knowledge sharing with strategic alliance organizations (External KS SAO), techniques for supplementing internal organization knowledge sharing (Internal KS TS), and external organization knowledge sharing with customers (External KS C).

Five items were included in the first factor. Prior research studies (Weiss, 1999; Lesser, Mundel, & Wiecha, 2000; Lowendahl, Revang, & Fosstenlokken, 2001; Inkpen, 1996, 1998) suggested that for the purpose of knowledge sharing firms should: (1) encourage the organization’s members to share their working experiences; (2) transfer employees’ working experiences into “resources” of the organization; (3) encourage employees to work with strategic alliance partners; and (4) provide job training programs, conferences, or internal consulting. Lastly, it is important for the organization’s leadership to support these knowledge sharing activities. These knowledge sharing activities are associated with management strategies. This study, therefore, defines the first factor as the strategies of internal organization knowledge sharing.

Four items constituted a second factor. Prior research studies (Inkpen, 1996, 1998; Nonaka, 1994; Tsai, 2001; Lyles & Salk, 1996) suggested that, for the purpose of knowledge sharing, learning, and developing between organizations (strategic alliance partners) organizations should regularly visit with each other and hold regular meetings together. Additionally, organizations in strategic alliances can create a “community” that allows its members to share and create knowledge. Such organizations should work together to develop products and services in the competitive marketplace. This study defines the second factor as external organization knowledge sharing with the strategic alliance organizations.

The third factor contains three items. Prior research studies (e.g. Davenport, Harris, & Kohli, 2001) have suggested that organizations should develop enough appropriate repositories for knowledge collection as well as techniques for knowledge collection and sharing. Additionally, an organization should create processes for managing customer data and translating data into organization knowledge. This study defines the third factor as techniques for supplementing internal organization knowledge sharing.

The fourth factor has two items. Prior researchers stress the importance of customer knowledge (Davenport & Prusak, 1998; Davenport, 1998; Davenport, Harris, &

Kohli, 2001; Lesser, Mundel, & Wiecha, 2000; Gareia-Murillo & Annabi, 2002; Gibbert, Leibold, & Probst, 2002) and suggest that firms focus on their most valued customers and capture knowledge from interactions with customers. Additionally, firms should create a workplace culture that is moving toward the customer-centric. This study defines the fourth factor as external organization knowledge sharing with customers.

In summary, using exploratory factor analysis, the construct of knowledge sharing was found to be a variable with multidimensions, i.e., the strategies of internal organization knowledge sharing, external organization knowledge sharing with strategic alliance organizations, techniques for supplementing internal organization knowledge sharing, and external organization knowledge sharing with customers. These four dimensions were adopted to conduct the statistical analyses for testing the hypotheses for this study.

Reliability Testing

Chronbach's alpha was applied to measure the reliability of the survey questionnaire items. Chronbach's alpha was used to measure internal consistency. Based on this study's CFA and EFA results, transformational leadership is a unidimensional construct; whereas, transactional leadership is a multidimensional construct encompassing contingent reward, management-by-exception active,

management-by-exception passive, and laissez-faire leadership. The reliabilities of transformational leadership and the four dimensions of transactional leadership were found to be: 0.92, 0.73, 0.66, 0.53, and 0.62 respectively.

Based on the collected data, knowledge sharing was found to be a construct with multidimensions, consisting of the strategies of internal organization knowledge sharing, external organization knowledge sharing with strategic alliance organizations, techniques for supplementing internal organization knowledge sharing, and external organization knowledge sharing with customers. The reliabilities of these four dimensions were found to be: 0.88, 0.87, 0.76, and 0.51 respectively.

The CFA and EFA results also confirm organizational marketing effectiveness to be a multidimensional construct including both internal and external marketing effectiveness. The reliabilities of these two dimensions were found to be 0.913 and 0.853 respectively.

Chronbach's alpha score ranges from 0 to 1, with a value larger than 0.50 indicating a low level of acceptability (George & Mallery, 2001). Overall, the Chronbach's alpha scores for this study were found to meet the required level.

Descriptive Statistics and Correlation Analysis

Four theoretical constructs, i.e., transformational leadership, transactional leadership, knowledge sharing, and organizational marketing effectiveness were

integrated to study the relationships among leadership behaviors, knowledge sharing and organizational marketing effectiveness in professional service firms that have been engaged in strategic alliances. Based upon collected data and prior research studies, both confirmatory factor analysis and exploratory factor analysis techniques were used, and the dimensions of each construct and the items associated with the specific dimensions were determined. Descriptive statistics in SPSS 11.5 were performed to determine the means and standard deviations of all variables. Additionally, Pearson's correlation analysis was conducted to explore the relationships among all the dimensions to be studied.

Descriptive Statistics

Twenty items relating to transformational leadership behaviors are included in the MLQ – 5X short form (Bass & Avolio, 2000). Due to the CFA and EFA results, 16 items were extracted (See Table 13). Based upon the suggestions of prior research studies (Bycio, Hackett & Allen, 1995; Shin & Zhou, 2003) and the results of the correlation analysis, this study integrated these 16 items into a single index of transformational leadership. Respondents were asked to describe the transformational leadership behaviors of managers who are directly leading them. The five-point Likert scale, ranging from “not at all” valued as a “1” to “frequently if not always” valued as a

“5,” was used. Table 18 displays the means and standard deviations of all items in the single index of transformational leadership.

Table 18 shows that respondents perceive their managers to have a sense of power and confidence in their own leadership and respect for their followers. They are willing to spend time teaching and coaching their followers. They are confident about achieving the organization’s goals. Additionally, they consider the moral and ethical dimensions of decision making.

Table 18

Mean, Standard Deviation and Reliability of Transformational Leadership

Dimension and Items	Mean	SD	Cronbach alpha
Transformational Leadership	3.61	0.65	0.92
Gets me to look at problems from many different angles.	3.61	0.97	
Helps me to develop my strengths.	3.50	0.99	
Suggests new ways of looking at how to complete assignments.	3.40	1.03	
Specifies the importance of having a strong sense of purpose.	3.69	0.93	
Spends time teaching and coaching.	3.74	1.04	
Expresses confidence that goals will be achieved.	3.87	0.81	
Considers me as having different needs, abilities and aspirations from others.	3.36	1.01	
Articulates a compelling vision of the future.	3.49	0.94	
Talks optimistically about the future.	3.58	0.98	
Talks enthusiastically about what needs to be accomplished.	3.68	0.90	

Table 18

Mean, Standard Deviation and Reliability of Transformational Leadership (Continue)

Dimension and Items	Mean	SD	Cronbach alpha
Displays a sense of power and confidence.	3.95	0.78	
Talks about their most important values and beliefs.	3.21	1.08	
Treats me as an individual rather than just as a member of a group.	3.73	1.02	
Acts in ways that build my respect.	3.59	1.04	
Considers the moral and ethical consequences of decisions.	3.72	0.88	
Seeks differing perspectives when solving problems.	3.58	0.96	

Sixteen items relating to transactional leadership behaviors are included in the MLQ – 5X short form (Bass & Avolio, 2000). The results of CFA and EFA found four dimensions which are contingent reward, management-by-exception passive, laissez-faire, and management-by-exception active leadership; 13 items associated with each specific dimension were extracted (See table 15). Respondents were asked to describe the transactional leadership behaviors of managers who are directly leading them. The five-point Likert scale, ranging from “not at all” valued as a “1” to “frequently if not always” valued as a “5,” was used. Table 19 displays the means and standard deviations of all items in the four dimensions of transformational leadership.

Table 19 shows that, with transactional leadership behaviors, respondents perceive their managers to display contingent reward leadership behavior much more than other

leadership behaviors. With this leadership method, managers assign or reach agreement on what needs to be done, and they promise rewards in exchange for satisfactorily carrying out the assignment.

Table 19

Mean, Standard Deviation and Reliability of Transactional Leadership

Dimension and Items	Mean	SD	Cronbach alpha
Contingent reward	3.55	0.67	0.73
Makes clear what one can expect to receive when performance goals are achieved.	3.03	1.05	
Expresses satisfaction when I meet expectations.	3.62	0.89	
Discusses in specific terms who is responsible for achieving performance targets.	3.79	0.86	
Provides me with assistance in exchange for my efforts.	3.76	0.80	
Management-by-exception passive	2.44	0.78	0.53
Fails to interfere until problems become serious.	2.45	0.92	
Shows that he/she is a firm believer in "If it ain't broke, don't fix it."	2.43	0.98	
Laissez-faire	2.18	0.71	0.62
Delays responding to urgent questions.	2.39	1.00	
Avoids making decisions.	2.01	0.92	
Is absent when needed.	2.16	0.90	
Management-by-exception active	3.04	0.74	0.66
Keeps track of all mistakes.	3.07	1.16	
Focuses attention on irregularities, mistakes, exceptions and deviations from standards.	3.24	0.99	
Concentrates his/her full attention on dealing with mistakes, complaints and failures.	3.07	1.04	
Directs my attention toward failures to meet standards.	2.79	1.04	

Eighteen items are included in the measurement instrument of marketing effectiveness (Webster, 1995). Due to the results of the CFA and EFA, Webster's construct was modified into a construct with two dimensions. Based on the prior research study of Leisen, Lilly, and Winsor (2002) these two dimensions were labeled to be internal and external marketing effectiveness. Additionally, 14 items were extracted to assign to appropriate dimensions (See Table 16).

Respondents were asked to assess how well their companies implement the four dimensions of Webster's research. The five-point Likert scale, ranging from "strongly disagree" valued as a "1" to "strongly agree" valued as a "5," was used. Table 20 displays the means and standard deviations of all items in the four dimensions of knowledge sharing. Table 20 shows how respondents of the study perceive their companies focus on customers. Results show that the firms define their target customers, recognize the needs and wants of customers, and monitor customer satisfaction and word-of-mouth communication. Additionally, these firms focus on long-term growth.

Table 20

Mean, Standard Deviation and Reliability of Marketing Effectiveness

Dimension and Items	Mean	SD	Cronbach alpha
Internal marketing effectiveness	3.42	0.70	0.91
My organization's marketing thinking is successfully communicated and implemented from the top down.	3.28	0.96	
Management commits to marketing excellence.	3.54	0.86	
Management is doing an effective job and the marketing resources are adequate and are deployed efficiently.	3.46	0.82	
Management shows good capacity to react quickly and effectively to on-the-spot developments.	3.52	0.85	
Marketing management is working well with the management in other functional areas.	3.43	0.82	
The current marketing strategy is clear and innovative.	3.41	0.90	
Management's focus on the organization is to be a good community neighbor.	3.35	0.90	
My organization develops a detailed annual marketing plan and a careful long-range plan that is updated annually.	3.38	0.97	
External marketing effectiveness	3.77	0.63	0.85
My organization monitors customer satisfaction.	3.91	0.84	
My organization stimulates and monitors word-of-mouth communication.	3.77	0.80	
My organization defines and communicates well the business to target customers.	3.78	0.84	
My organization focuses on long-term growth.	4.01	0.77	
Management takes a whole marketing system view (consists of competitors, customers, and environment) in planning business.	3.65	0.80	
My organization contributes substantial effort to measure the cost-effectiveness of different marketing expenditures.	3.53	0.90	

Due to a lack of empirical research studies on knowledge sharing in strategic alliance settings, 18 items were developed to examine how large size accounting firms both in Taiwan and the United States that have been engaged in strategic alliances, implement the sharing of knowledge both within and between organizations. Using exploratory factor analysis and prior research studies (See Chapter II), four dimensions were defined. These dimensions are: (1) the strategies of internal organization knowledge sharing, (2) external organization knowledge sharing with strategic alliance organizations, (3) techniques for supplementing internal organization knowledge sharing, and (4) external organization knowledge sharing with customers. Additionally, 14 out of 18 items were extracted and then assigned to their specific dimension (See Table 17).

The five-point Likert scale, ranging from “strongly disagree” valued as a “1” to “strongly agree” valued as a “5,” was used. Table 21 displays the means and standard deviations of all items in the four dimensions of knowledge sharing. Generally, the respondents agree that their firms implementing knowledge-sharing activities within the organization and between organizations. They perceive their leaders to be supportive of knowledge-sharing activities. For the purpose of knowledge sharing, the surveyed participating firms have provided job training programs, conferences, or internal consulting. Additionally, these firms have developed appropriate repositories for

knowledge collection and developed techniques for knowledge collection and sharing.

Table 21

Mean, Standard Deviation and Reliability of Knowledge Sharing

Dimension and Items	Mean	SD	Cronbach alpha
Internal KS S	3.86	0.67	0.88
My organization encourages employees to share their working experiences, such as their experiences in interacting with customers.	3.80	0.89	
My organization's leadership supports the activities related to knowledge sharing.	4.02	0.76	
My organization transfers employees' working experiences into "resources" that can be used by employees.	3.70	0.89	
My organization encourages employees to work together and share knowledge with our strategic alliance partners.	3.77	0.86	
My organization has job training programs, conferences, or internal consulting for the purpose of knowledge transferring and sharing.	4.03	0.74	
External KS SAO	3.68	0.67	0.87
My organization and strategic alliance partners have visited each regularly for the purpose of knowledge sharing and learning.	3.48	0.85	
My organization regularly conducts meetings with strategic alliance partners for the purpose of communication and knowledge developing and sharing.	3.71	0.80	
My organization and strategic alliance partners create a "community" that allows strategic alliance members to share and create knowledge.	3.64	0.82	
In order to develop competitive products or services, my organization creates and shares knowledge with strategic alliance partners.	3.89	0.72	

Table 21

Mean, Standard Deviation and Reliability of Knowledge Sharing (Continue)

Dimension and Items	Mean	SD	Cronbach alpha
Internal KS TS	3.94	0.68	0.76
My organization develops enough appropriate repositories for knowledge collection.	3.99	0.82	
My organization creates techniques for collecting and sharing the knowledge from customers and strategic alliance partners.	3.99	0.86	
My organization creates a process for managing customer data and translating data into knowledge.	3.85	0.82	
External KS C	3.92	0.65	0.51
My organization focuses on the most valued customers and captures the knowledge from interactions (or “socialization”) with customers.	3.84	0.78	
My organization creates a workplace culture that is moving toward the customer-centric.	3.99	0.82	

Note: The strategies of internal organization knowledge sharing (Internal KS S), external organization knowledge sharing with strategic alliance organizations (External KS SAO), techniques for supplementing internal organization knowledge sharing (Internal KS TS), and external organization knowledge sharing with customers (External KS C)

Correlation Analysis

Eleven dimensions were used to test the hypotheses and answer the research questions. The correlation analysis was performed to identify aspects of the relationships among these dimensions. Originated by Karl Pearson in about the year 1900, the coefficient of correlation is used to describe the strength of the relationship between two sets of variables. Designated r , it is often referred to as Pearson's r and as

the Pearson product-moment correlation coefficient. It can assume any value from -1.00 to +1.00 inclusive. A correlation coefficient of -1.00 or +1.00 and -0.50 or +0.50 indicates perfect correlation and moderate correlation respectively. Table 22 displays a correlation matrix for all dimensions.

Both transformational leadership and contingent reward leadership behaviors are significantly and positively correlated with knowledge sharing and organizational marketing effectiveness. Laissez-faire leadership behavior is significantly and negatively correlated with external organization knowledge sharing with customers. Knowledge sharing is significantly and positively correlated with organizational marketing effectiveness.

Table 22: Correlation Matrix of All Dimensions

	1	2	3	4	5	6	7	8	9	10	11	12	13
1 Transformational leadership													
2 Contingent reward	.772**												
3 Management-by-exception passive	-.238**	-.087											
4 Laissez-faire	-.384**	-.377**	.263**										
5 Management-by-exception active	.135	.059	-.022	.085									
6 The strategies of internal knowledge sharing	.372**	.416**	-.002	-.152	.063								
7 External knowledge sharing with strategic alliance organization	.157*	.244**	.002	-.126	.141	.602**							
8 Techniques for supplementing of internal knowledge sharing	.249**	.285**	-.029	-.073	.109	.633**	.593**						
9 External knowledge sharing with customer	.194*	.229**	.088	-.246**	.026	.425**	.406**	.421**					
10 Internal marketing effectiveness	.375**	.410**	-.013	-.192*	.075	.499**	.405**	.403**	.358**				
11 External marketing effectiveness	.305**	.251**	-.024	-.124	.181*	.543**	.509**	.578**	.485**	.671**			

** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed)

Hypotheses Testing

Five research hypotheses were presented in Chapter III to answer the research questions: (1) How do the transformational and transactional leadership behaviors affect the sharing of knowledge in the strategic alliance setting? (2) How does knowledge sharing affect the organizational marketing effectiveness in the strategic alliance setting? and (3) How do the transformational and transactional leadership behaviors affect the sharing of knowledge and, in turn, the marketing effectiveness of organizations in the strategic alliance setting? For this analysis, the independent variables were subordinates' perceptions of their managers' leadership behaviors including both transformational and transactional leadership behaviors. The mediating variable was knowledge sharing, and the dependent variable was organizational marketing effectiveness. To test the hypotheses, multiple regression analysis and canonical correlation analysis were conducted, with a 0.05 significant level.

Testing the Effects of Leadership Behaviors on the Sharing of Knowledge

The first two hypotheses measured whether transformational leadership and transactional leadership are positively correlated with knowledge sharing. Based on prior research studies (See Chapter II & III), the following hypotheses were developed.

- H₀₁: Leaders' transformational leadership is negatively correlated or not correlated with the sharing of knowledge in the strategic alliance setting.
- H_{A1}: Leaders' transformational leadership is positively correlated with the sharing of knowledge in the strategic alliance setting.
- H₀₂: Leaders' transactional leadership is negatively correlated or not correlated with the sharing of knowledge in the strategic alliance setting.
- H_{A2}: Leaders' transactional leadership is positively correlated with the sharing of knowledge in the strategic alliance setting.

Table 22 shows that four dimensions of knowledge sharing were significantly and positively correlated with each other. In this case, therefore, these four dimensions were integrated into a single index tapping the variable of knowledge sharing; and this index was used in testing the first hypothesis. As mentioned earlier, transformational leadership was modified to be a unidimensional construct for this study. Simple regression analysis was performed to test the first hypothesis since both the independent and dependent variables were considered a single factor.

The EFA and CFA results showed that the collected data for this study meets the theoretical construct of transactional leadership. The four dimensions, i.e., contingent reward, management by exception active, management by exception passive, and laissez-faire leadership, and 13 items associated with each dimension were extracted for this study (See table 15). A multiple regression analysis was performed to test the second hypothesis; for when the dependent variable of knowledge sharing was considered to be a single variable. Additionally, a canonical correlation analysis was

conducted for when the dependent variable of knowledge sharing was still considered to be the multiple variables. A canonical correlation analysis is a multivariable statistical model that facilitates the study of interrelationships among sets of multiple dependent variables and multiple independent variables (Green, 1978). Whereas multiple regression analysis predicts a single dependent variable from a set of multiple independent variables, canonical correlation simultaneously predicts multiple dependent variables from multiple independent variables (Hair, Anderson, Tatham, & Black, 1998). This study uses both types of analyses to determine the relationship between transactional leadership and knowledge sharing.

Table 23 summarizes the regression results of the first hypothesis test. Using a simple regression analysis, the coefficient of correlation, R and coefficient of determination, R^2 were found to be 0.316 and 0.100 respectively. The R^2 of 0.100 is a percentage that indicating that 10% of the variation in the organization's knowledge sharing is affected by the organization's leadership through transformational leadership behavior (TF). To determine whether this regression model is valid; in other word, could the amount of explain variation, R square occurred by chance, the global test was adopted (Mason, Lind, 1993). A valid regression model was found, with an F -value of 18.063, a Sig. F of 0.000, a t -value of 4.250, and a Sig. t of 0.000. The regression

equation generated for the first hypothesis was as follows:

$$Y = 2.862 + .270 (\text{transformational leadership}).$$

Therefore, the null hypothesis was rejected. The transformational leadership behaviors (TF), in this study, were found to be positively related to the sharing of knowledge within the organization and between organizations.

To examine how transformational leadership behaviors affect each dimension of the knowledge sharing construct, a second analysis was performed. In this case, knowledge sharing was entered as multiple dependent variables, consisting of the strategies of internal organization knowledge sharing (INKSS), external organization knowledge sharing with strategic alliance organizations (EXKSSAO), techniques for supplementing internal organization knowledge sharing (INKSTS), and external organization knowledge sharing with customers (EXKSC). The dimension of the strategies of internal organization knowledge sharing was found to be most affected by transformational leadership behaviors, in which the coefficient of correlation, R and coefficient of determination, R^2 were found to be 0.372 and 0.138 respectively (See Table 23). This study, therefore, finds that transformational leadership behaviors are a significant predictor of knowledge sharing, especially for the dimension relating to strategies of internal organization knowledge sharing.

Table 23

Result of Regression Analysis of Knowledge Sharing on Transformational Leadership Behaviors

Independent Variables	R	R ²	ANOVA		Coefficients				
			F	Sig.	B	Beta	t	Sig.	
(Constant)					2.862			12.297	.000
TF → KS	.316	.100	18.063	.000	.270	.316		4.250	.000
TF →					3.089			10.420	.000
EXKSSAO	.157	.025	4.100	.045	.164	.157		2.025	.045
TF →					2.466			8.882	.000
INKSS	.372	.138	26.157	.000	.388	.372		5.114	.000
TF →					2.991			10.160	.000
INKSTS	.249	.062	10.811	.001	.264	.249		3.288	.001
TF →					3.205			11.216	.000
EXKSC	.194	.038	6.383	.012	.197	.194		2.526	.012

Note: Transformational leadership (TF), knowledge sharing (KS), the strategies of internal organization knowledge sharing (INKSS), external organization knowledge sharing with strategic alliance organizations (EXKSSAO), techniques for supplementing internal organization knowledge sharing (INKSTS), and external organization knowledge sharing with customers (EXKSC)

For the second hypothesis, both multiple regression and canonical correlation analyses were conducted to determine whether transactional leadership behaviors are significant predictors of knowledge sharing. Table 24 summarizes the multiple regression results of the second hypothesis test. The coefficient of multiple correlation, R and coefficient of multiple determination, R² were found to be 0.396 and 0.157 respectively. The R square of 0.157 indicates that of the variation in the sharing of knowledge, 15.7% can be explained by transactional leadership behaviors. A global test

was performed to determine whether or not this regression model is valid. The test investigates whether all the independent variables have zero net regression coefficients (Mason & Lind, 1993). To test whether the net regression coefficients in the population are zero, the null and alternative hypotheses were developed as:

$$H_0: \beta_{CR} = \beta_{MBEA} = \beta_{MBEP} = \beta_{LF} = 0$$

H_1 : Not all the β s are 0

If the null hypothesis is true, it implies that the regression coefficients are all zero, and thus, no use in predicting the dependent variable of knowledge sharing. An analysis of variance (ANOVA) was conducted, with a 0.05 significant level; the F-value and p value were found to be 7.456 and 0.00 respectively. The null hypothesis was rejected; therefore, logically, transactional leadership behaviors have a great bearing on the sharing of knowledge. Additionally, a multiple regression equation for the second hypothesis was generated to be:

$$Y = 2.584 + .294 (\text{contingent reward}) + .039 (\text{management by exception passive}) - .046 (\text{laissez-faire}) + .071 (\text{management by exception active}).$$

Four factors were included in the construct of transactional leadership behaviors. Do all four factors an impact on knowledge sharing? To answer this question is to find out if it is possible that any of the β s equal zero. The t value and p value results are shown in Table 24, and indicate that only contingent reward leadership is a significant predictor of knowledge sharing. In this case, therefore, the independent variables of

management by exception active (MBEA), management by exception passive (MBEP), and laissez-faire leadership (LF) should be removed from the results. In summary, the null hypothesis was rejected in this case. Therefore, the transactional leadership behaviors, especially contingent reward leadership (CR), were found to be significant predictors of the sharing of knowledge within the organization and between organizations.

Table 24

Result of Multiple Regression Analysis of Knowledge Sharing on Transactional Leadership Behaviors

Independent Variables	R	R ²	ANOVA		Coefficients				
			F	Sig.	B	Beta	t	Sig.	
(Constant)					2.584			7.455	.000
CR,					.294	.357		4.537	.000
MBEP,					.039	.056		.742	.459
LF					-.046	-.060		-.732	.465
& MBEA	.396	.157	7.456	.000	.071	.095		1.302	.195

Note: Contingent reward (CR), management by exception active (MBEA), management by exception passive (MBEP), and laissez-faire (LF)

Canonical Correlation Analysis on the Relationship between Transactional Leadership and Knowledge Sharing

Canonical correlation analysis is performed when the construct of knowledge sharing is still considered to be multiple variables. The first step in canonical correlation analysis is to derive one or more canonical functions. Using the variate with

the smallest data set, the maximum number of canonical functions is extracted from the set of independent or dependent variables. In this case, four canonical functions were derived as both independent and dependent variable sets containing equal numbers of variables (See Table 25). To determine which canonical functions should be extracted to interpret the relationship between independent and dependent variable sets, three criteria are suggested by Hair, Anderson, Tatham and Black (1998). The three criteria are (1) level of statistical significance of the function, (2) magnitude of the canonical correlation, and (3) redundancy measure for the percentage of variance accounted for from the two data sets.

Table 25

Canonical Correlation Analysis on the Relationship between Transactional Leadership Behaviors and Knowledge Sharing

Canonical Function	Canonical Correlation, R_c	Canonical R_c^2	F Statistic	Sig. of F
1	.428	.183	3.099	.000
2	.273	.074	1.759	.074
3	.144	.021	.837	.502
4	.001	.000	.000	.991

In this case, only the first canonical function was extracted because its F statistic and p-value were found to meet the required significance level (Thompson, 1984), and its canonical correlation was found to meet the guidelines suggested for significant factor

loadings (Dillon & Goldstein, 1984; Hair, Anderson, Tatham and Black, 1998). Canonical correlation (a score of 0.428 in this case) indicates the strength of the relationship between the two variates of transactional leadership behaviors and knowledge sharing. The canonical correlation is different from multiple regression in that it does not deal with a single dependent variable, but rather a composite of dependent variables. In this case, a moderate degree of correlation was found between the variates of transactional leadership behaviors and knowledge sharing.

The output of SPSS produced indices of redundancy for the first canonical function. Although the index of redundancy is similar to a coefficient of multiple determination, it cannot be assumed that 100 % of the variance in the dependent variable set can be explained by the independent variable set. The set of independent variables can only be expected to account for the shared variance in the dependent canonical variate. The index of redundancy, however, is perfectly analogous to the multiple regression's R^2 statistic (Hair, Anderson, Tatham & Black, 1998). The redundancy index is calculated as the average canonical loading squared times the canonical R_c^2 . The indices of redundancy for the independent variate of transactional leadership behaviors (TA) and the dependent variate of knowledge sharing (KS) were found to be 0.065 and 0.098 respectively (See Table 26). The index of redundancy of 6.50% found in the

independent variate indicates that 6.50% of the variation in the dependent variables of knowledge sharing (KS) (taken as a set) is explained by the independent variables of transactional leadership behaviors (TA) (taken as a set). Conversely, the index of redundancy of 9.80% found in the dependent variate indicates that 9.80% of the variation in the independent variables of transactional leadership behaviors (TA) (taken as a set) is explained by the dependent variables of knowledge sharing (KS) (taken as a set). The indices of redundancy were found to have met the suggested value of larger than .05 (Wu & Lin, 2001).

Table 26

Calculation of the Redundancy Indices for the First Canonical Function on the Relationship between Transactional Leadership Behaviors and Knowledge Sharing

Variate/Variables	Canonical Loading	Canonical Loading Squared	Average Loading Squared	Canonical R_c^2	Redundancy Index
Dependent variables					
Internal KS S	.971	.943			
External KS SAO	.609	.371			
Internal KS TS	.657	.432			
External KS C	.630	.397			
Dependent variate, KS			.536	.183	.098
Independent variables					
CR	.977	.955			
MBEP	.500	.250			
LF	-.455	.207			
MBEA	.137	.019			
Independent variate, TA			.358	.183	.065

Note: Knowledge sharing (KS), The strategies of internal organization knowledge sharing (Internal KS S), external organization knowledge sharing with strategic alliance organizations (External KS SAO), techniques for supplementing internal organization knowledge sharing (Internal KS TS), and external organization knowledge sharing with customers (External KS C), transactional leadership (TA), contingent reward (CR), management by exception active (MBEA), management by exception passive (MBEP), and laissez-faire (LF).

When the canonical relationship is deemed statistically significant and the canonical correlation and redundancy index are acceptable, the next step for the

researcher is to determine the relative importance of each of the original variables in deriving the canonical relationships. Two methods, i.e., canonical weights and canonical loading were performed to interpret the relationships. Table 27 contains the standardized canonical weights for each canonical variate for both knowledge sharing and transactional leadership behaviors. The standardized canonical weights represent their relative contribution to the variate. Variables with relatively larger weights contribute to the importance of the variates. Additionally, variables whose weights have opposite signs exhibit an inverse relationship with each other, and variables with weights of the same sign exhibit a direct relationship. In this case, the order of importance of the contribution of independent variables to transactional leadership behaviors is contingent reward (CR), management by exception passive (MBEP), laissez-faire (LF), and management by exception active (MBEA). The order of importance of the contribution of dependent variables on knowledge sharing is the strategies of internal organization knowledge sharing (INKSS), external organization knowledge sharing with customers (EXKSC), external organization knowledge sharing with strategic alliance organizations (EXKSSAO), and techniques for supplementing internal organization knowledge sharing (INKSTS) (See Table 27).

Table 27

Canonical Weights for the First Canonical Function on the Relationship between Transactional Leadership Behaviors and Knowledge Sharing

Independent variables	Canonical Weights	Dependent variables	Canonical Weights
CR	.925	INKSS	.866
MBEP	.175	EXKSSAO	-.030
LF	-.161	INKSTS	.013
MBEA	.100	EXKSC	.268

Canonical loading, also referred to as canonical structure correlation, measures the simple linear correlation between an original observed variable in a dependent or independent set and the set's canonical variate. The canonical loading reflects the variance that the observed variable shares with the canonical variate. The larger the coefficient, the more important it is in deriving the canonical variate. Figure 2 displays the linear combination of the relationship between transactional leadership behaviors and knowledge sharing. Figure 2 shows that the most important variable for the transactional leadership variate is contingent reward leadership, in which its canonical loading was found to be .977. The loading for contingent reward leadership met the suggested value, with loadings of 0.3 and higher (Tabachnick & Fidell, 2001). Contingent reward leadership (CR) appeared to have the most important effect on the sharing of knowledge within the organization and between organizations. On the other hand, four variables included in the variate of knowledge sharing represented a higher

relationship with their variate. All four canonical loadings were found to meet the suggested guideline, with loadings exceeding .60. Hence, a moderate degree of inter-correlation among the four variables was indicated. This is the reason this study integrated the four variables into a single index of knowledge sharing for conducting a multiple regression analysis. The most important variable for the knowledge sharing variate was the strategies of internal organization knowledge sharing (INKSS), in which the canonical loading was found to be .971. The variable strategies of internal organization knowledge sharing (INKSS) was found to be the variable most affected in the relationship between transactional leadership behaviors and knowledge sharing.

Given that the canonical relationship was deemed statistically significant and the canonical correlation and redundancy index were found to meet acceptable levels, the null hypothesis for the second hypothesis was rejected. The same conclusion was found using both multiple regression and canonical correlation analyses. Additionally, the affect of contingent reward leadership that was found in the canonical correlation analysis corresponded with the results of the multiple regression analysis. Most importantly, the canonical correlation analysis provided the linear correlation between the original observed variables in the dependent set of knowledge sharing, or the independent set of transactional leadership behaviors, and the set's canonical variate.

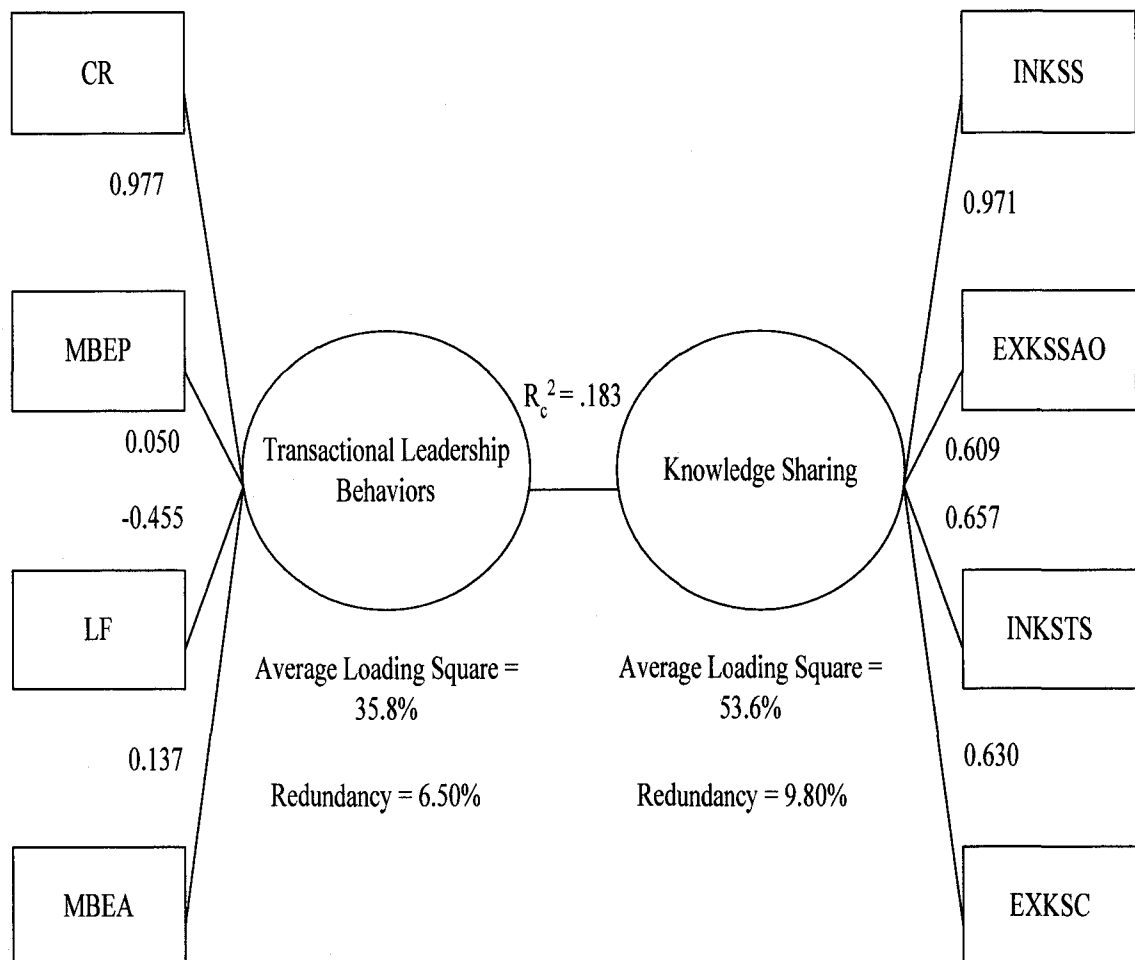


Figure 2: Linear combination of the relationship between transactional leadership behaviors and knowledge sharing

Note: The strategies of internal organization knowledge sharing (INKSS), external organization knowledge sharing with strategic alliance organizations (EXKSSAO), techniques for supplementing internal organization knowledge sharing (INKSTS), external organization knowledge sharing with customers (EXKSC), contingent reward (CR), management by exception active (MBEA), management by exception passive (MBEP), and laissez-faire (LF)

Testing the Effects of Knowledge Sharing on Marketing Effectiveness

The third hypothesis measured whether knowledge sharing is positively correlated with organizational marketing effectiveness. Based on prior research studies (See Chapters II & III), the following hypothesis was developed.

H₀₃: The sharing of knowledge is negatively correlated or not correlated with the marketing effectiveness of the organization in the strategic alliance setting.

H_{A3}: The sharing of knowledge is positively correlated with the marketing effectiveness of the organization in the strategic alliance setting.

To determine the relationship between knowledge sharing and organizational marketing effectiveness, the construct of knowledge sharing was developed. Based upon prior research studies and the results of EFA, four dimensions of knowledge sharing were identified for this study. These dimensions are: (1) the strategies of internal organization knowledge sharing, (2) external organization knowledge sharing with strategic alliance organizations, (3) techniques for supplementing internal organization knowledge sharing, and (4) external organization knowledge sharing with customers. This study fills a gap in empirical studies on knowledge sharing by studying the strategic alliance setting. The construct of marketing effectiveness developed by Webster (1995) was adopted to study organizational marketing effectiveness. Based on prior research studies and CFA and EFA results, two dimensions of marketing effectiveness were defined as internal and external marketing effectiveness.

Based on the collected data, a higher inter-correlation ($r = 0.671$) was found between these two dimensions of marketing effectiveness (See Table 22). Therefore, the researcher averaged the 14 items to a single index tapping the construct of marketing effectiveness and used this index to test the third hypothesis. This single index was used to measure an organization's overall marketing effectiveness.

A multiple regression analysis was performed, with the dependent variable of marketing effectiveness considered to be a single variable. Table 28 summarizes the multiple regression results of the third hypothesis. The coefficient of multiple correlation, R and coefficient of multiple determination, R^2 were found to be 0.636 and 0.404 respectively. The R value of 0.636 indicated a moderate correlation between knowledge sharing and marketing effectiveness. The R square value of 0.404 indicated that of the variation in the marketing effectiveness, 40.40% can be explained by knowledge sharing. A global test was performed to determine whether or not this regression model is valid. It investigates whether all the independent variables have zero net regression coefficients (Mason & Lind, 1993). To test whether the net regression coefficients in the population are zero, the null and alternative hypotheses were developed as:

$$H_0: \beta_{\text{EXKSSAO}} = \beta_{\text{INKSS}} = \beta_{\text{INKSTS}} = \beta_{\text{EXKSC}} = 0$$

$$H_1: \text{Not all the } \beta\text{s are } 0$$

If the null hypothesis is true, it implies that the regression coefficients are all zero; and thus, of no use in predicting the dependent variable of marketing effectiveness. The analysis of variance (ANOVA) was conducted, with a 0.05 significant level; the F-value and p value were found to be 27.150 and 0.00 respectively. The null hypothesis was rejected; therefore, logically, knowledge sharing has a great bearing on the organization's marketing effectiveness. Additionally, a multiple regression equation for the third hypothesis was generated to be:

$$Y = .785 + .117 (\text{EXKSSAO}) + .267 (\text{INKSS}) - .153 (\text{INKSTS}) + .185 (\text{EXKSC}).$$

Four factors were included in the construct of knowledge sharing. Do all four factors have an impact on the organization's marketing effectiveness? To answer this question is to find out if it is possible that any of the β s equal zero. The results of the t value and p value are found in Table 28; they indicate that only the dimension of external organization knowledge sharing with strategic alliance organizations should be removed from the results. The null hypothesis was rejected in this case. Therefore, knowledge sharing within the organization and between organizations, especially the factors of (1) the strategies of internal organization knowledge sharing (INKSS), (2) techniques for supplementing of internal organization knowledge sharing (INKSTS), and (3) external organization knowledge sharing with customers (EXKSC) were found to be positively

related with the organization's marketing effectiveness.

Table 28

Result of Multiple Regression Analysis of Marketing Effectiveness on Knowledge Sharing

Independent Variables	R	R ²	ANOVA		Coefficients			
			F	Sig.	B	Beta	t	Sig.
(Constant)					.785		2.849	.005
EXKSSAO,					.117	.129	1.564	.120
INKSS,					.267	.294	3.422	.001
INKSTS,					.153	.171	2.009	.046
& EXKSC	.636	.404	27.150	.000	.185	.198	2.832	.005

Note: The strategies of internal organization knowledge sharing (INKSS), external organization knowledge sharing with strategic alliance organizations (EXKSSAO), techniques for supplementing internal organization knowledge sharing (INKSTS), and external organization knowledge sharing with customers (EXKSC).

Canonical Correlation Analysis on the Relationship between Transactional Leadership and Knowledge Sharing

The canonical correlation analysis was conducted with dependent variable of marketing effectiveness considered as having multiple variables. The first step in canonical correlation analysis is to determine how many canonical functions should be extracted to interpret the relationship between the independent and dependent variates. The canonical correlation analysis was restricted to derive two canonical functions as dependent variable set contained only two variables. In this case, the first canonical

function was extracted since its F statistic and p-value were found to meet the required significance level (Thompson, 1984), and its canonical correlation met the guidelines suggested for significant factor loadings (Dillon & Goldstein, 1984; Hair, Anderson, Tatham and Black, 1998). Canonical correlation R_c was found to be 0.674 indicating a moderate correlation between the independent set of knowledge sharing and the dependent set of marketing effectiveness (See Table 29).

Table 29

Canonical Correlation Analysis on the Relationship between Knowledge Sharing and Marketing Effectiveness

Canonical Function	Canonical Correlation, R_c	Canonical R_c^2	F Statistic	Sig. of F
1	.674	.454	15.147	.000
2	.198	.039	2.168	.094

The indices of redundancy for the independent variate of knowledge sharing and the dependent variate of marketing effectiveness were found to be .287 and .358 respectively (See Table 30). The index of redundancy, 28.75% found in the independent variate indicates that 28.75% of the variation in the dependent variables of marketing effectiveness (taken as a set) can be explained by the independent variables of knowledge sharing (taken as a set). Conversely, the index of redundancy, 35.80% found in the dependent variate indicates that 35.80% of the variation in independent variables of

knowledge sharing (taken as a set) can be explained by the dependent variables of marketing effectiveness (taken as a set). The indices of redundancy indicate that the knowledge sharing and marketing effectiveness variates were significantly and positively correlated with each other.

Table 30

Calculation of the Redundancy Indices for the First Canonical Function on the Relationship between Knowledge Sharing and Marketing Effectiveness

Variate/Variables	Canonical Loading	Canonical Loading Squared	Average Loading Squared	Canonical R_c^2	Redundancy Index
Dependent variables					
Internal ME	.774	.599			
External ME	.989	.978			
Dependent variate, ME			.789	.454	.358
Independent variables					
INKS S	.836	.699			
EXKS SAO	.766	.587			
INKS TS	.852	.726			
EXKS C	.722	.521			
Independent variate, KS			.633	.454	.287

Note: Marketing effectiveness (ME), knowledge sharing (KS), the strategies of internal organization knowledge sharing (INKS S), external organization knowledge sharing with strategic alliance organizations (EXKS SAO), techniques for supplementing internal organization knowledge sharing (INKS TS), and external organization knowledge sharing with customers (EXKS C).

Furthermore, two methods, i.e., canonical weights and canonical loading were

performed to interpret the relationship between knowledge sharing and marketing effectiveness. Table 31 contains the standardized canonical weights for each canonical variate for both knowledge sharing and marketing effectiveness. The standardized canonical weights represent their relative contribution to the variate. Variables with relatively larger weights contribute more importance to variates. In this case, the order of importance of the contribution of independent variables to knowledge sharing is techniques for supplementing internal organization knowledge sharing (INKSTS), external organization knowledge sharing with customers (EXKSC), the strategies of internal organization knowledge sharing (INKSS), and external organization knowledge sharing with strategic alliance organizations (EXKSSAO). The order of importance of the contribution of dependent variables on knowledge sharing is external marketing effectiveness and internal marketing effectiveness (See Table 31).

Table 31

Canonical Weights for the First Canonical Function on the Relationship between Knowledge Sharing and Marketing Effectiveness

Independent variables	Canonical Weights	Dependent variables	Canonical Weights
INKS S	.328	Internal ME	.201
EXKS SAO	.205	External ME	.854
INKS TS	.380		
EXKS C	.340		

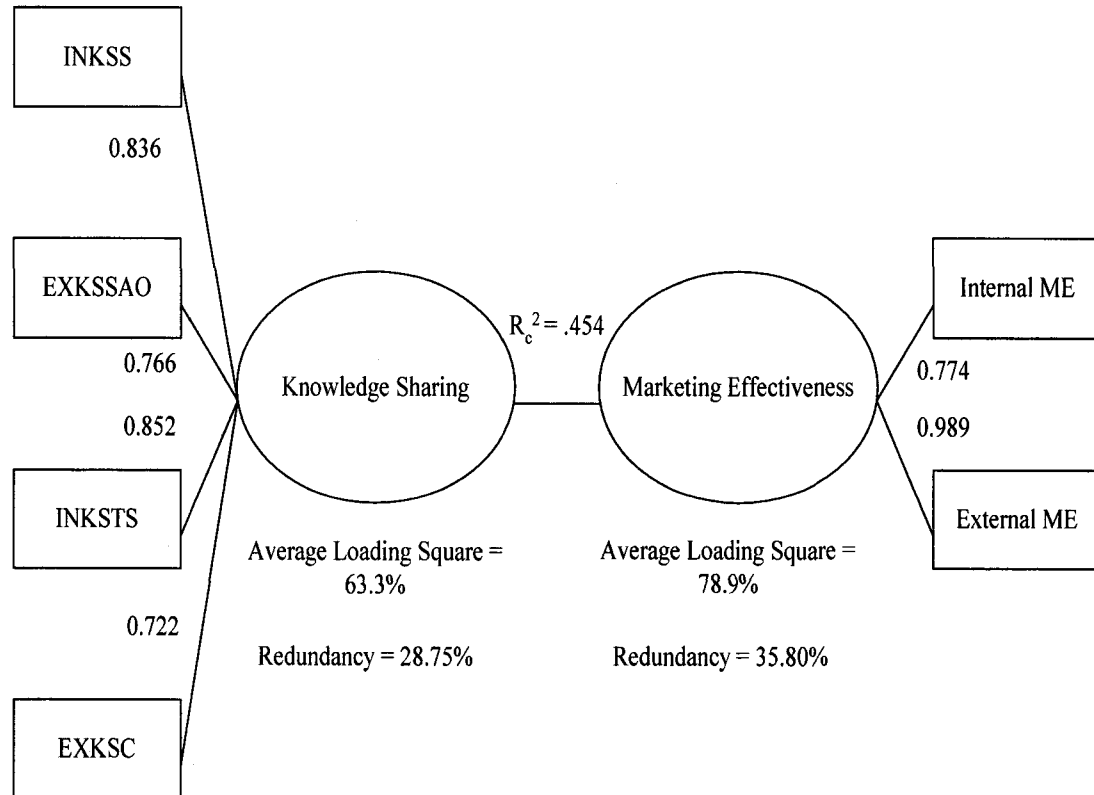


Figure 3: Linear combination of the relationship between knowledge sharing and marketing effectiveness

Note: The strategies of internal organization knowledge sharing (INKSS), external organization knowledge sharing with strategic alliance organizations (EXKSSAO), techniques for supplementing internal organization knowledge sharing (INKSTS), and external organization knowledge sharing with customers (EXKSC)

The canonical loading reflects the variance that the observed variable shares with the canonical variate. The larger the coefficient, the more important it is in deriving the canonical variate. Figure 3 displays the linear combination of the relationship between knowledge sharing and marketing effectiveness. All four variables included in the variate of knowledge sharing were found to have loadings exceeding .70. The most important variables for the knowledge sharing variate were techniques for supplementing

internal organization knowledge sharing (INKSTS) and the strategies of internal organization knowledge sharing (INKSS). Two variables of internal and external marketing effectiveness that are included in the variate of marketing effectiveness represented a higher relationship with their variate, where the canonical loadings were found to be .774 and .989 respectively. This indicated a strong degree of inter-correlation between the two variables, which is why these two variables were combined into a single index of marketing effectiveness to conduct the multiple regression analysis. The most important variable for the marketing effectiveness variate was external marketing effectiveness. The variable of external marketing effectiveness was the variable most affected in the relationship between knowledge sharing and marketing effectiveness.

Given that the canonical relationship was deemed statistically significant and canonical correlation and redundancy index were found to meet the acceptable levels, the null hypothesis of the third hypothesis was rejected. The same conclusion was found when using both multiple regression analysis and canonical correlation analysis. The canonical correlation analysis, however, provided additional information in interpreting the relationship. When canonical correlation analysis provided the linear correlation between the two variates, all two variables included in marketing effectiveness were

found to be significantly and positively affected by all four of the variables included in knowledge sharing. Additionally, the external organization marketing effectiveness in the construct of marketing effectiveness was found to be mostly affected by knowledge sharing.

Testing the Mediating Effects of Knowledge Sharing

The fourth and fifth hypotheses were to measure whether or not knowledge sharing is a mediator of the relationship between transformational and transactional leadership behaviors and marketing effectiveness. Based on prior research studies (See Chapter II & III), the following hypotheses were developed.

- H₀₄: The sharing of knowledge does not mediate the relationship between transformational leadership and marketing effectiveness of the organization in the strategic alliance setting.
- H_{A4}: The sharing of knowledge mediates the relationship between transformational leadership and marketing effectiveness of the organization in the strategic alliance setting.
- H₀₅: The sharing of knowledge does not mediate the relationship between transactional leadership and marketing effectiveness of the organization in the strategic alliance setting.
- H_{A5}: The sharing of knowledge mediates the relationship between transactional leadership and marketing effectiveness of the organization in the strategic alliance setting.

To test the mediating effects of knowledge sharing, this study followed the widely used procedure suggested by Baron and Kenny (1986). Baron and Kenny describe four steps that must be taken to establish that a mediated relationship exists. To be

considered, three variables are used, with X as the predictor variable; Y as the outcome variable; and M as the mediating variable. The steps are:

- (1) Show that X is a significant predictor of Y, using regression.
- (2) Show that X is a significant predictor of M, using regression.
- (3) Show that M is a significant predictor of Y, when X is to be controlled. The multiple regression analysis can be used in this step, using X and M as predictors, and Y as the outcome.
- (4) If M is a complete mediator of the relationship between X and Y, the effect of X when M is to be controlled, should be zero. If it is only a partial mediator, the effect will be merely reduced, not eliminated.

Testing the Mediating Effects of Knowledge Sharing on the Relationship between Transformational Leadership Behaviors and Marketing Effectiveness

To perform the regression analysis, both variables of knowledge sharing and marketing effectiveness were considered to be single indices. Table 32 summarizes the results of the four steps in determining whether or not knowledge sharing is a mediator of the relationship between transformational leadership behaviors and marketing effectiveness. The results of the first two steps show transformational leadership behaviors (TF) to be a significant predictor of marketing effectiveness (ME) and

knowledge sharing (KS). To determine whether knowledge sharing is a significant predictor of marketing effectiveness in the third step, the variables of transformational leadership and knowledge sharing were entered as the predictors. However, these two variables when controlled for transformational leadership were found to be predictors of marketing effectiveness.

The first three steps were found to be accepted by the criteria. The last step is to determine whether the mediating variable of knowledge sharing is a complete mediator or partial mediator between transformational leadership behaviors and marketing effectiveness. To do this, the variables of knowledge sharing and transformational leadership were entered as the predictors; however, these two variables when controlled for knowledge sharing were found to be significant predictors of marketing effectiveness. This result, therefore, indicates that knowledge sharing is not a complete mediator between transformational leadership behaviors and marketing effectiveness. Additionally, the regression coefficients were found to be reduced from .359 (as found in step 1) to .189, meaning a partial mediation has occurred. Based on the results of the four steps, the null hypothesis in the fourth hypothesis was rejected. Knowledge sharing, therefore, partially mediates the contributions of transformational leadership behaviors to marketing effectiveness in the strategic alliance setting.

Table 32

Results of Regression Analysis for Mediating Variable of Knowledge Sharing between Transformational Leadership and Marketing Effectiveness

Steps	R	R ²	ANOVA		Coefficients				
			F	Sig.	B	Beta	t	Sig.	
Step 1:									
TF → ME	.378	.143	27.155	.000	.359	.378	5.211	.000	
Step 2:									
TF → KS	.316	.100	18.063	.000	.270	.316	4.250	.000	
Step 3:									
TF	.378	.143	27.155	.000	.189	.199	3.190	.002	
x KS → ME	.656	.430	61.229	.000	.627	.565	9.046	.000	
Step 4:									
KS	.628	.395	106.297	.000	.627	.565	9.046	.000	
x TF → ME	.656	.430	61.229	.000	.189	.199	3.190	.002	

Note: Transformational leadership (TF), knowledge sharing (KS), marketing effectiveness (ME)

Testing the Mediating Effects of Knowledge Sharing on the Relationship between Transactional Leadership Behaviors and Marketing Effectiveness

Since the transactional leadership behaviors were found to be multivariable (contingent reward, management by exception active, management by exception passive, and laissez-faire leadership), a stepwise regression analysis was conducted to determine which variables should be extracted. The results of the stepwise regression analysis indicate that the variables of contingent reward and laissez-faire leadership, included in transactional leadership behaviors, should be extracted for this study. Table 33 summarizes the results of the stepwise regress analysis.

Table 33

Results of Stepwise Regression Analysis for the Relationships between Transactional Leadership and Marketing Effectiveness and Knowledge Sharing

Relationships	R	R ²	ANOVA		Coefficients			
			F	Sig.	B	Beta	t	Sig.
CR, MBEP*, LF*, & MBEA* → ME	.377	.142	27.065	.000	.344	.377	5.202	.000
							.190	.849
							-.552	.582
							1.468	.144
LF, MBEP*, & MBEA* → ME	.179	.032	5.415	.021	-.155	-.179	-2.327	.021
							.379	.705
							1.885	.061
CR, MBEP*, LF*, & MBEA* → KS	.381	.145	27.604	.000	.313	.381	5.254	.000
							.554	.580
							-.418	.677
							1.215	.226
LF, MBEP*, & MBEA* → KS	.171	.029	4.935	.028	-.133	-.171	-2.222	.028
							.700	.485
							1.633	.104

Note: Contingent reward (CR), laissez-faire (LF), management by exception active (MBEA), management by exception passive (MBEP), knowledge sharing (KS), marketing effectiveness (ME), * excluded variables

Based on the results of stepwise regression analysis, the fifth hypothesis focuses on examining how the changes in contingent reward and laissez-faire leadership behaviors lead to changes in the level of knowledge sharing and, in turn, in the level of an organization's marketing effectiveness in the strategic alliance setting. Contingent reward leadership behavior (CR) was examined first, then laissez-faire leadership behavior (LF). Table 34 summarizes the results of the four steps for determining

whether or not knowledge sharing is a mediator of the relationship between contingent reward leadership behavior and marketing effectiveness.

Table 34

Results of Regression Analysis for Mediating Variable of Knowledge Sharing between Contingent Reward Leadership and Marketing Effectiveness

Steps	R	R ²	ANOVA		Coefficients				
			F	Sig.	B	Beta	t	Sig.	
Step 1:									
CR → ME	.377	.142	27.065	.000	.344	.377	5.202	.000	
Step 2:									
CR → KS	.381	.145	27.604	.000	.313	.381	5.254	.000	
Step 3:									
CR	.377	.142	27.605	.000	.147	.162	2.493	.014	
x KS → ME	.646	.417	57.954	.000	.629	.567	8.737	.000	
Step 4:									
KS	.628	.395	106.297	.000	.629	.567	8.737	.000	
x CR → ME	.646	.417	57.954	.000	.147	.162	2.493	.014	

Note: Contingent reward (CR), knowledge sharing (KS), marketing effectiveness (ME)

For the results of the first two steps, contingent reward leadership behavior (CR) was found to be a significant predictor of marketing effectiveness (ME) and knowledge sharing (KS). To determine whether knowledge sharing was a significant predictor of marketing effectiveness in the third step, the variables of contingent reward leadership behavior and knowledge sharing were entered as predictors. However, these two variables, when controlled for contingent reward leadership were found to be significant

predictors of marketing effectiveness.

The first three steps were found to be accepted by the criteria. The last step was to determine whether the mediating variable of knowledge sharing, is a complete mediator or partial mediator between contingent reward leadership behavior and marketing effectiveness. To do this, the variables of knowledge sharing and contingent reward leadership behavior were entered as predictors. However, these two variables when controlled for knowledge sharing were found to be significant predictors of marketing effectiveness. This result, therefore, indicates that knowledge sharing is not a complete mediator between contingent reward leadership behavior and marketing effectiveness. Additionally, the regression coefficients were found to be reduced from .344 (as found in step 1) to .147, meaning that partial mediation has occurred.

Based on the results of the four steps, the null hypothesis was rejected. Knowledge sharing, therefore, partially mediates the contribution of contingent reward leadership behavior to marketing effectiveness in the strategic alliance setting.

Table 35 summarizes the results of the four steps for determining whether or not knowledge sharing is a mediator of the relationship between laissez-faire leadership behavior and marketing effectiveness. The results of the first two steps show that laissez-faire leadership behavior (LF) is a significant predictor of marketing effectiveness

(ME) and knowledge sharing (KS).

To determine whether knowledge sharing is a significant predictor of marketing effectiveness in the third step, the variables of laissez-faire leadership behavior and knowledge sharing were entered as predictors. However, only knowledge sharing when controlled for laissez-faire leadership was found to be a significant predictor of marketing effectiveness. In this step, the results of the t-value and p-value (See Table 35) indicate that only knowledge sharing is a significant predictor of marketing effectiveness in the regression model. The last step was to determine whether the mediating variable of knowledge sharing is a complete mediator or partial mediator between laissez-faire leadership behavior and marketing effectiveness. To do this, the variables of knowledge sharing and laissez-faire leadership behavior were entered as predictors. However, knowledge sharing only was found to be a significant predictor of marketing effectiveness. Based on the results of steps three and four, laissez-faire leadership was found to have a weak effect on marketing effectiveness. Knowledge sharing, therefore, was found to be a partial mediator between laissez-faire leadership behavior and marketing effectiveness. For the fifth hypothesis, this study, therefore, concluded that knowledge sharing partially mediates the contribution of contingent reward and laissez-faire leadership, which are transactional leadership behaviors, to marketing

effectiveness. As the affect of laissez faire leadership to marketing effectiveness was found to be weak, knowledge sharing, therefore, is close to a complete mediating variable between laissez-faire leadership behavior and the organization's marketing effectiveness.

Table 35

Results of Regression Analysis for Mediating Variable of Knowledge Sharing between Laissez-faire Leadership and Marketing Effectiveness

Steps	R	R ²	ANOVA		Coefficients				
			F	Sig.	B	Beta	t	Sig.	
Step 1:									
LF → ME	.179	.032	5.415	.021	-.155	-.179	-2.327	.021	
Step 2:									
LF → KS	.171	.029	4.935	.028	-.133	-.171	-2.222	.028	
Step 3:									
LF	.179	.032	5.415	.021	-.064	-.074	-1.194	.234	
x KS → ME	.632	.400	54.001	.000	.683	.616	9.966	.000	
Step 4:									
KS	.628	.395	106.297	.000	.683	.616	9.966	.000	
x LF → ME	.632	.400	54.001	.000	-.064	-.074	-1.194	.234	

Note: Laissez-faire (LF), Knowledge sharing (KS), marketing effectiveness (ME)

Chapter Summary

Chapter IV provided the statistical results and analysis needed to answer the research questions. Surveys were distributed to 360 knowledge workers who work in large accounting firms both in Taiwan and the United States; 172 surveys were returned, with 165 found to be valid for the study. Demographics information was obtained from

41 accounting offices participating in this study. This information provided characteristics of large-size firms both in Taiwan and the United States.

Four theoretical constructs, i.e., transformational leadership, transactional leadership, knowledge sharing, and marketing effectiveness were integrated to answer the research questions. Based upon the collected data and using CFA and EFA techniques, the dimensions associated with each specific constructs were defined. The correlation matrix was provided to examine the relationships among these research dimensions. Descriptive statistics provided the sample means and standard deviations to determine (1) how respondents perceive their leaders' transformational and transactional leadership behaviors (Bass & Avolio, 2000); (2) how the surveyed participating firms implement the sharing of knowledge both within and between organizations; and (3) how respondents perceive their firms implement the four dimensions of marketing effectiveness (Webster, 1995). Five research hypotheses were presented in Chapter III to answer the research questions. Multiple regression and canonical correlation analyses were performed to test the hypotheses. Table 36 summarizes the significant findings of the five research hypotheses.

Table 36

The Findings of the Research Hypotheses

Hypotheses	Findings
H ₁	<p>(1) Transformational leadership behaviors were found to be positively related to the sharing of knowledge within the organization and between the organizations.</p> <p>(2) The dimension of strategies of internal organization knowledge sharing was found to be most affected by transformational leadership behaviors.</p>
H ₂	<p>(1) Contingent reward leadership as part of transactional leadership behaviors was found to be positively related to the sharing of knowledge within the organization and between the organizations.</p> <p>(2) The dimension of strategies of internal organization knowledge sharing (one of the dimensions in the construct of knowledge sharing) was found to be most affected by transactional leadership behaviors, especially contingent reward leadership.</p>
H ₃	<p>(1) Knowledge sharing except external organization knowledge sharing with strategic alliance organizations was found to be positively correlated with the organization's marketing effectiveness in the strategic alliance setting.</p> <p>(2) The external organization marketing effectiveness in the construct of marketing effectiveness was found to be mostly affected by knowledge sharing in the strategic alliance setting.</p>
H ₄	<p>(1) Knowledge sharing was found to partially mediate the contribution of transformational leadership behaviors to marketing effectiveness in the strategic alliance setting.</p>
H ₅	<p>(1) Knowledge sharing partially mediates the contribution of contingent reward and laissez-faire leadership, which are transactional leadership behaviors, to marketing effectiveness in the strategic alliance setting.</p>

Chapter V provides discussion and implications of these findings. It also includes limitations of the research, recommendations for future research, and conclusions.

CHAPTER V

SUMMARY AND CONCLUSION

Overview

The literature review in Chapter II discussed several research studies, which included: (1) research on the relationships among leadership, knowledge management, and organizational effectiveness, (2) research on the relationship between knowledge management and organizational marketing effectiveness, and (3) research on the relationship between knowledge management and strategic alliances. Yet, none has examined the relationships among leadership behavior, knowledge sharing, and organizational marketing effectiveness in the strategic alliance setting. The research conducted, to date, has studied specific behaviors associated with the transformational and transactional leadership models. This study, therefore, is unique in that it has helped to fill this gap.

The purpose of this study was to answer these research questions: (1) How do the transformational and transactional leadership behaviors affect the sharing of knowledge in the strategic alliance setting? (2) How does knowledge sharing affect the organizational marketing effectiveness in the strategic alliance setting? and (3) How do the transformational and transactional leadership behaviors affect the sharing of

knowledge and, in turn, the marketing effectiveness of organizations in the strategic alliance setting? Additionally, this study was to fill the gap in the field of knowledge management by developing a theoretical construct (also a measurement) of knowledge sharing in strategic alliance setting.

This study utilized an integrated questionnaire that consisted of the Multifactor Leadership Questionnaire (MLQ – 5X Short Form) (Bass & Avolio, 2000), Marketing Effectiveness Questionnaire (Webster, 1995), and Questionnaire of Knowledge Sharing in Strategic Alliance Setting to answer the research questions. Forty-one large-size accounting firms' offices both in Taiwan and the United States participated in this study. A total of 360 surveys were sent to these participating offices, in which 172 were returned, and 165 were found to be valid for a useable response rate of 45.8%.

The research problem and objectives for this study were specified in Chapter I. Chapter II identified the literature in this area, and previous research findings. Subsequently, hypotheses and a research model were formulated and presented in Chapter III. Study findings were outlined in Chapter IV. This concluding chapter covers the significance of the findings, discussion and the implications of the study, the limitations of the study, recommendations for future research, and conclusions.

Significance of the Findings

There are four areas of significant findings for this present study. They are: (1) the finding of the measurement of knowledge sharing in strategic alliance setting, (2) the findings of survey instruments, (3) the results of research hypotheses, and (4) the findings of demographics characteristics. A briefly explanation for these significant findings is provided in the below.

The finding of the measurement of knowledge sharing

Due to a lack of empirical research studies on knowledge sharing in strategic alliance settings, 18 items were developed in this study to examine how large-size accounting firms both in Taiwan and the United States, that have been engaged in strategic alliances, implement the sharing of knowledge both within and between organizations. Using exploratory factor analysis, four factors were extracted. Based upon prior research studies, these four factors were defined to be: (1) the strategies of internal organization knowledge sharing, (2) external organization knowledge sharing with strategic alliance organizations, (3) techniques for supplementing internal organization knowledge sharing, and (4) external organization knowledge sharing with customers. The questionnaire of knowledge sharing in strategic alliance setting was found to be a reliable questionnaire and can be used in the future research.

The Findings of Survey Instruments

Three survey instruments were integrated to answer the research questions (See Chapter III). Descriptive statistics technique were conducted to determine (1) how respondents perceived their managers' transformational and transactional leadership behaviors (Bass & Avolio, 2000); (2) how the surveyed participating firms implement the sharing of knowledge both within and between organizations; and (3) how respondents perceived their firms implement the four dimensions of marketing effectiveness (Webster, 1995). The significant findings for these questions were as follows:

- (1) The respondents perceived their managers have a sense of power and confidence for their leadership style but show respect to their followers.
- (2) The respondents perceived their managers are willing to spend time with followers to teaching and coaching them.
- (3) The respondents perceived their managers are confident about achieving the organizations' goals.
- (4) The respondents perceived their managers consider the moral and ethical dimensions in decision making.
- (5) The respondents perceived their managers display contingent reward leadership much more than other leadership behaviors in terms of transactional leadership behaviors.

- (6) The respondents perceived their leaders supporting the knowledge-sharing activities.
- (7) The respondents perceived that their firms have provided job training programs, conferences, or internal consulting for the purpose of knowledge sharing.
- (8) The respondents perceived that their firms have created techniques for knowledge collection and sharing.
- (9) The respondents perceived that their firms consider customers and focus on long-term growth.
- (10) The respondents perceived that their firms have defined their target customers, recognized the customers' needs and wants, and monitored customer satisfaction and word-of-mouth communication.

The Findings of Research Hypotheses

Based upon the literature review in Chapter II, five hypotheses were developed and presented in Chapter III to answer the research questions. Using the multiple regression analysis and canonical correlation analysis, the results of the five research hypotheses were found in Chapter IV. The significant findings for these five hypotheses were as follows:

- (1) Transformational leadership behaviors were found to be positively related to the sharing of knowledge within the organization and between the organizations.

- (2) The dimension of strategies of internal organization sharing (one of dimensions in the construct of knowledge sharing) was found to be most affected by transformational leadership behaviors.
- (3) Contingent reward leadership as part of transactional leadership behaviors was found to be positively related to the sharing of knowledge within the organization and between the organizations.
- (4) The dimension of the strategies of internal organization knowledge sharing (one of the dimensions in the construct of knowledge sharing) was found to be most affected by transactional leadership behaviors, especially contingent reward leadership.
- (5) Knowledge sharing, except external organization knowledge sharing with strategic alliance organizations, was found to be positively related with the organization's marketing effectiveness in the strategic alliance setting.
- (6) The external organization marketing effectiveness in the construct of marketing effectiveness was found to be mostly affected by knowledge sharing in the strategic alliance setting.
- (7) Knowledge sharing was found to partially mediate the contribution of transformational leadership behaviors to marketing effectiveness in the strategic alliance setting.

- (8) Knowledge sharing partially mediated the contribution of contingent reward and laissez-faire leadership that parts of transactional leadership behaviors to marketing effectiveness in the strategic alliance setting.

Lastly, in terms of demographics, five questions were included in survey, namely employees' gender, age, educational level, job level in organization, and tenure. The significant demographics findings were as follows:

- (1) More than 50% of respondents were female, with 61.2% of respondents female and 38.8% of respondents male.
- (2) Overall, most accounting professionals are between 25 to 29 years old and between 30 to 34 years old, accounting for 38.2% and 27.3% of respondents respectively.
- (3) The bachelor's degree was the highest educational degree received for approximately 73.3% of the respondents.
- (4) Overall, the most accounting professionals who responded are middle and entry levels, accounting for 30.3% and 38.8% of respondents respectively.
- (5) Approximately 71.5% of respondents have worked for their companies anywhere from 1 to 5 years.

Discussion & Implications of the Study

This study focused on examining the relationships among leadership behavior,

knowledge sharing, and organizational marketing effectiveness in professional service firms that have been engaged in strategic alliances. Based on the significant findings of this study and prior research studies, this section provides the implications for academic researchers and practitioners. The implications of this study are focused on: (1) the implications of leadership behaviors to knowledge sharing, (2) the implications of knowledge sharing to an organization's marketing effectiveness, and (3) the implications of leadership behaviors to an organization's marketing effectiveness. A brief explanation for these implications is provided below.

Implications of Leadership to Knowledge Sharing

There has been no previous direct empirical evidence to suggest a relationship between leaders' transformational and transactional leadership behaviors and knowledge sharing within the organization and between organizations. To fill the research gap, this study focused on examining this relationship with an additional emphasis on professional service firms that have been engaged in strategic alliances. Effective leadership in a knowledge intensive organization is a challenge. Drucker (1993) has stressed that ".... knowledge workers own their knowledge and can take it with them wherever they go" (p. 8). This statement is supported by the respondents of the United States in this present study. The demographic results revealed that approximately 78.5% of the United States

respondents have worked for their firms anywhere from 1 to 5 years, but the majority of the United States respondents are between 25 to 29 years old, between 30 to 34 years old, and 40 years old and over, accounting for 26.4%, 26.4%, and 30.6% of respondents respectively (See Table 10). This result, therefore, indicated that a moderate turnover ratio was occurring in large-size accounting firm in the United States.

Indeed, the problem of employees' turnover may trigger managers to contribute the effects on transferring employees' working experiences into knowledge, creating techniques for knowledge collection and sharing, and encouraging employees to share their working experiences. Additionally, organization will need to contribute the effort on training the replacements. Support may be found in the survey results showing that firms provide job training programs, conferences, or internal consulting for the purpose of knowledge transferring and sharing. It can be suggested that leaders should think how to keep the talented people by using the appropriate leadership behavior.

As knowledge has often been perceived as a source of power, people tend to have feelings of "ownership" and often hoard knowledge. Many professionals have little respect for others outside their field. This adds to competition among professionals and may be added to as a result of reward and recognition (Cole-Gomolski, 1997). Thus, Vermaak and Weggeman (1999) pointed out that those professionals who do not develop

and share their knowledge together merely rest on their laurels. In this present study, the respondents perceived that their managers display contingent reward leadership much more than other leadership within the construct of transactional leadership behaviors. With this leadership method, the managers assign or get agreement on what needs to be done and promise rewards in exchange for satisfactorily carrying out the assignment. Moreover, contingent reward leadership behavior was found to be positively related to knowledge sharing in this study. Comparing prior research with the findings of this study, although contingent reward leadership is a significant predictor of the sharing of knowledge in the organization and between the organizations, leaders should be aware that this type of behavior may increase the competition among their professionals.

Moreover, leaders' transformational or transactional behaviors were found to be merely slightly related to the dimension of external organization knowledge sharing with strategic alliance organizations. A lower mean value was found in this dimension. These results might indicate that leaders' efforts on managing knowledge sharing between organizations should be contributed to by the leaders on both sides of the alliance. Therefore, a leader should think how to deal with their partner's leader to achieve mutual benefit for both of the companies.

Leadership, however, should also be focused on establishing a culture that respects

knowledge, reinforces its sharing, retains its people, and builds loyalty to the organization (Bollinger and Smith, 2001). McDermott and O'Dell (2001) have argued

In an organization with a knowledge sharing culture, people would share ideas and insights because they see it as natural, rather than something they are forced to do. They would expect it of each other and assume that sharing ideas is the right things to do (p. 77).

It can be suggested that transformational leadership behaviors can create a knowledge sharing culture. Bass and Avolio (1993, 1994) supported this point of view.

In this present study, leaders' transformational leadership behaviors were found to be significant predictors of the sharing of knowledge within the organization and between the organizations. This study also found that those transformational leaders are confident about achieving the organizations' goals, and the respondents perceived their leaders supporting the knowledge-sharing activities. This study, therefore, suggests that leaders' transformational behaviors are the most appropriate style to stimulate sharing of knowledge within organization and between organizations.

Results from the present research also showed that the dimension of the strategies of internal organization knowledge sharing (one of dimensions in the construct of knowledge sharing) was the dimension to be most affected by transformational and

contingent leadership behaviors. Indeed, the respondents perceived that their managers are supporting the knowledge-sharing activities by encouraging employees to work together and also share their working experience, transferring employee's working experience into "resources", and providing job training programs, conferences, or internal consulting. Notably, prior research studies have found that transformational and transactional leadership behaviors are predictors of organizational commitment and job satisfaction (Dubinsky, Yammario, & Spangler, 1995; Yammario & Bass, 1990; Chen, 2002; Chen & Barnes, 2003_b). It might be assumed, therefore, that leaders' transformational and contingent leadership behaviors enhanced organizational commitment and job satisfaction and, in turn, the sharing of knowledge within the organization. Future research might identify this relationship. Politis's (2002) research, however, was the most appropriate study to support the present research finding. He reported that the dimension of idealized influence attributed leadership has a positive and significant relationship with the knowledge acquisition of knowledge workers.

Implications of Knowledge Sharing to Marketing Effectiveness

Is there a relationship between knowledge sharing and the organization's marketing effectiveness? This study began to fill the gap in the academic research of this relationship. This present study proposed that knowledge-sharing activities are

prerequisites to marketing effectiveness (See Table 5). Four dimensions were defined to form the construct of knowledge sharing. Generally, the respondents agree their firms have contributed efforts among these four dimensions. The present research found that knowledge sharing is a significant predictor of the organization's marketing effectiveness, except the dimension of the external organization knowledge sharing with strategic alliance partners. Prior research studies suggested that in the strategic alliance setting, firms should visit and conduct meetings with their alliance firm regularly. Additionally, an organization and its strategic alliance partner can create a "community" that allows strategic alliance members to share and create knowledge. Therefore, these organizations may work together to develop products and services in the competitive marketplace.

Why, then, do these accounting firms rarely share knowledge with their strategic alliance organization? Perhaps the answer can be found in an interview with a senior manager from one of the Big Four accounting firms in Taiwan. He pointed out that "Although he is my strategic alliance's partner, he is also my competitor. In this situation, we may just do what we need to do or based on what the contract said, so it will be difficult to have any thing extra." Therefore, trust and organizational culture between the organizations should be also considered for effective knowledge sharing with

strategic alliance partners.

As presented in Chapter II, the formation of strategic alliances in accounting firms is more likely to be a networking alliance. This entails more reliance on social interaction among individuals both intra-organization and inter-organization. Huotari and Livonen (2004) have pointed out that “Social interaction allows units to access knowledge or new information. These knowledge flows require interaction to promote trust and to reduce perceived uncertainty about providing or acquiring new knowledge to other units” (p. 17). Lane (1998) has stressed that trust is a highly desirable property, especially in a knowledge-intensive business. Davenport and Prusak (1998) have noted that “Without trust, knowledge initiatives will fail” (p. 34).

Several other researchers have found that the impact of organizational culture is not just within the organization but also inter-organizational. For example, Mosakowski (1997) stressed that the juxtaposition of two different organizational cultures in an alliance may result in ambiguity for each partner. Additionally, Choi and Lee (1997) have found that the greater the difference between the partners in terms of the corporate, national, organizational, and professional culture, the greater the difficulty of transferring knowledge through cooperative inter-organizational relationships.

When examining an organization’s marketing effectiveness, this study found that

the surveyed firms tend to ignore the organization's internal marketing process. In particular, their marketing thinking is not always communicated and implemented from the top down. The respondents, therefore, perceived a lack of clarity of their firms' marketing plan. One reason for this problem may also be found in the interview with the senior manager of one of the Big Four accounting firms in Taiwan. He pointed out that "Professionals in a large-size accounting firm are usually focused solely on their specific tasks, and the tasks are highly specialized. Thus, only marketing professionals or senior managers consider the firm's marketing plan or understand the firm's marketing strategies." In the marketing effectiveness instrument, item 5 (See Appendix A) "Marketing management is working well with the management in other functional areas" was answered by respondents with a level of "neither agree or disagree". This result can also be understood by what the Big Four senior manager said.

Implications of Knowledge Sharing and Leadership to Marketing Effectiveness

Lastly, this study was to determine whether or not knowledge sharing is a mediating variable between transformational and transactional leadership behaviors and marketing effectiveness. Knowledge sharing in this study was found to be a partial mediator between transformational, contingent reward, laissez-faire leadership behaviors between marketing effectiveness (See Table 32, 34 & 35). This means that

transformational, contingent reward, laissez-faire leadership behaviors are also significant predictors of the organization's marketing effectiveness. Transformational leadership, however, was found to be the most significant predictor of the organization's marketing effectiveness. Transformational leadership, therefore, can be recommended for enhancing the effectiveness of an organization's marketing. Bass (1997_b) perhaps is the pioneer to reveal the relationship between the full range of transformational and transactional leadership and marketing management. He proposed how components of the full range of transformational and transactional leadership can engender effective selling. To follow Bass's concept, this study also proposed the relationship between leaders' transformational leadership behaviors and the organization's marketing effectiveness. Table 37 summarizes this relationship.

Table 37

The Relationship between Transformational Leadership and Marketing Effectiveness

Effective Leadership	Organization's Marketing Effectiveness
Idealized influence (attributed & behavior)	The leaders build trust with colleagues; respect their opinions; show extraordinary capabilities, persistence, and determination; demonstrate high standards of ethical and moral conduct; and are willing to take risks and are consistent rather than arbitrary. Thus, leaders behave in these ways to take a whole marketing system view (consists of competitors, customers, and environment) in planning business; to develop annual marketing plan and also long-term plan; and to communicate and implement the plan from top down.

Table 37

The Relationship between Transformational Leadership and Marketing Effectiveness
(Continue)

Effective Leadership	Organization's Marketing Effectiveness
Inspirational motivation	Leaders are inspiring and motivating in the eyes of their subordinates by providing meaning and challenge to their followers' work. Leaders are able to have followers involved in envisioning attractive futures with the company; they create clearly communicated expectations that followers want to meet and also demonstrate commitment to goals and shared vision. Marketing plan, therefore, can be communicated and implemented from top down. Thus, leader and followers will commit to marketing excellence; and marketing management can be worked well with management in other functional areas.
Intellectual stimulation	Leaders stimulate their followers' efforts to be innovative and create by questioning assumptions, reframing problems, and approaching old situations in new ways. Creativity is encouraged. New ideas and creative problem solutions are solicited from followers, who are included in the process of addressing problems and finding solutions. Thus, firm can recognize the importance of designing the organization to serve the needs and wants of a chosen market; and can develop different offering and marketing plans for different segments of the market.
Individual consideration	Leaders give personal attention to followers and make each feel valued and important. Individual difference in terms of needs and desires are recognized. Leaders behave this way can develop different offering and marketing plans for different segments of the market; know the sales potential and profitability of different market segments; and monitor customer satisfaction. Additionally, leaders will consider the organization is to be a good community neighbor.

As presented in Chapter IV, two dimensions, i.e., internal and external organization's marketing effectiveness were found to be included in the construct of organization's marketing effectiveness. In the third hypothesis, an organization's external marketing effectiveness was found to be most affected by knowledge sharing (See Figure 2). External marketing effectiveness refers to an organization's external focus on long-term growth, taking the whole marketing system view in planning businesses, defining and communicating the business to target customers, understanding customer needs and wants, monitoring customer satisfaction and word-of-mouth communication, and measuring the cost-effectiveness of different marketing expenditures. In the fourth and fifth hypotheses, knowledge sharing was also found to be a significant predictor of marketing effectiveness (when controlling transformational, contingent reward, and laissez-faire leadership). Moreover, transformational and contingent reward leadership behaviors in the first and second hypotheses were found to be significant predictors of the sharing of knowledge within the organization and between organizations.

This study, however, can conclude that the changes in leaders' transformational and contingent reward leadership behaviors lead to change in the levels of knowledge sharing and, in turn, in the level of organization's marketing effectiveness, especially external

organization's marketing effectiveness. Therefore, by training supervisors to exert transformational and contingent reward leadership, the sharing of knowledge within organization and between organizations, and organization's marketing effectiveness may be enhanced.

Limitations of the Study

Although the size of the returned sample, 165 knowledge workers, is considered to be a large-size sample (Mason & Lind, 1993), the researcher still considers that more data could be obtained to produce more reliable results. The sample size of this study, however, still should not be doubted. There were two difficulties to get the present research sample. One is the characteristic of knowledge workers in accounting firms. From the contact procedure, this study found that knowledge workers in large-size accounting firms don't seem to like participating in the survey and are also difficult to contact. In fact, some firms established a company policy to prevent individual requests from the researcher for the survey. Another difficulty is the time of distributing the surveys. This study distributed the surveys during the month of January which is considered the tax season for accounting firms in the United States. Thus, these knowledge workers are very busy with their clients during the season.

Due to the size of returned sample, the theoretical constructs of transformational

and transactional leadership behaviors and marketing effectiveness were found not to fit with the collected data (Kaplan, 1990). Exploratory factor analysis, however, was conducted to fill this research limitation. All 41 accounting firms' offices are considered large-size accounting firms. The results may be different for small or medium-sized accounting firms which could be examined with additional research.

Demographics may also impact the research results. This study combined the respondents from Taiwan and the United States; but the result might be different in these two different geographic areas, especially areas with differing cultures. Taiwan, one of settings for this study, is considered to have high power distance and collectivism (Hofstede, 1991). However, the participating firms in Taiwan are all Big Four CPA firms, thus, their management styles might be similar with the firms in the United States. Additionally, those knowledge workers in Taiwan received professional knowledge mostly from the United States, for example, textbooks in the management field used in the undergraduate and masters levels were mostly from the United States. Some of them received the bachelor and/or master degrees from the United States. Some of them have accounting licenses both in Taiwan and the United States. Therefore, the nation's culture might impact the results of the study, but it is still limited.

As discussed above, most knowledge workers in large-size accounting firms are

working on their specific task-related activities relevant to their specialty job such that the task is to be assigned to each specialty. Therefore, the section of the questionnaire on marketing effectiveness should only be answered in the future by marketing professionals and senior managers in regional headquarter or headquarter of the firm to obtain more reliable results. Such research, however, can be done in future research. Lastly, the focus of this study is professional service firms, in particular, the accounting firms and the findings may not be applicable to other industries.

Recommendations for Future Research

Six recommendations for future research are as follows:

- (1) As mentioned above, trust and organization culture might impact the sharing of knowledge within organization and between organizations. Therefore, studying how trust and organization culture affect the sharing of knowledge and, in turn, the marketing effectiveness of organizations in the strategic alliance settings might be valuable.
- (2) The organization's marketing effectiveness was measured in this study. Future study might want to examine these accounting firms' customer satisfaction, then to examine whether higher marketing effectiveness will enhance customer satisfaction. Knowledge sharing, however, is still a predictor of the organization's marketing

- effectiveness in this relationship. Remember the section of organization's marketing effectiveness should be answered by marketing professionals and senior managers in regional headquarter or headquarter of the firm.
- (3) If more reliable data can be obtained, structural equation modeling by using LISREL can be conducted to examine the whole research model that deals with the relationships among leaders' transformational and transactional leadership behaviors, knowledge sharing, marketing effectiveness, and customer satisfaction in the strategic alliance setting.
- (4) If more reliable data can be obtained in both Taiwan and the United States, the future research can examine how a nation's culture influences the relationships among leaders' transformational and transactional leadership behaviors, knowledge sharing, and organizational marketing effectiveness in the strategic alliance setting. Therefore, the nation's culture in this case would be considered to be a moderating variable.
- (5) Future research should expand this study into the manufacturing industry, so that more companies could benefit from the findings.
- (6) The questionnaire of knowledge sharing in strategic alliance setting was developed in this study. The researcher will want this questionnaire to be widely used in the

future research, thus, this questionnaire can be developed into a reliable and valid instrument.

Conclusion

Leadership, knowledge management, and strategic alliances are considered major business topics today. They are considered to be the important factors for business survival in this global competitive market environment. Research related to these topics can be found in professional journals, such as *Strategic Management Journal*, *Harvard Business Review*, *Organizational Science*, *Journal of Management*, *Journal of Marketing*, and *Academy of Management Journal* from the past 20 years to the present. Yet, no research has examined the relationships among leadership behaviors, knowledge sharing, and organization's marketing effectiveness, especially in strategic alliance settings and also in the professional service industry. This study, therefore, is useful in helping to fill this gap.

This study utilized an integrated questionnaire that consisted of the Multifactor Leadership Questionnaire (MLQ – 5X Short Form) (Bass & Avolio, 2000), Marketing Effectiveness Questionnaire (Webster, 1995), and Questionnaire of Knowledge Sharing in Strategic Alliance Setting to answer the research questions. Forty-one large-size accounting firms' offices both in Taiwan and the United States were accepted to

participate in this study. A total of 360 surveys were sent to these participating offices, in which 172 were returned, and 165 were found to be valid for analyzing in this study. The significant findings of this study are: (1) transformational leadership and contingent reward leadership behaviors were found to be positively related to the sharing of knowledge within the organization and between the organizations, (2) the dimension of the strategies of internal organization knowledge sharing, one of dimensions in the construct of knowledge sharing, was found to be mostly affected by transactional leadership behaviors, especially contingent reward leadership behavior, (3) knowledge sharing, except external organization knowledge sharing with strategic alliance organizations, was found to be positively related to the organization's marketing effectiveness, (4) the external organization marketing effectiveness in the construct of marketing effectiveness was found to be mostly affected by knowledge sharing, (5) knowledge sharing was found to be partially mediated the contribution of transformational leadership behaviors to marketing effectiveness in the strategic alliance setting, and (6) knowledge sharing partially mediated the contribution of contingent reward and laissez-faire leadership that parts of transactional leadership behaviors to marketing effectiveness in the strategic alliance setting.

Chapter Summary

This chapter discussed the significance of findings outlined in Chapter IV. It also addressed the implications of this study for academic researchers and practitioners. Limitations of the study were also explained. Lastly, recommendations for future research and conclusion were discussed.

APPENDIX A

INTEGRATED QUESTIONNAIRE ENGLISH VERSION

Dear Survey Respondent:

Your answers to the following questionnaire will be used in a research study concerning the relationship among leadership behaviors, knowledge sharing, and marketing effectiveness in the professional service firms who have engaged in the strategic alliance. There are no right or wrong answers, just your opinion. Your privacy will be totally protected. All responses will be reported in aggregate only; nothing is reported on an individual basis.

Thank you for your help!

Lecturer,
Department of Business Administration,
Chungchou Institute of Technology, Taiwan
Doctoral Candidate,
H. Wayne Huizenga School of Business and Entrepreneurship,
Nova Southeastern University, FL. U.S.A.
Andy Li-Yueh Chen

Part I Leadership Behavior

This is a questionnaire to provide information about leadership behavior. Please rate the person who directly leads you, and answer each item in an appropriate box. Below are 36 descriptive statements. Please judge how frequently the statement fits the leader you are describing by use the following rating scale:				
Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
1	2	3	4	5

The person I am rating ...

1.	Provides me with assistance in exchange for my efforts.	1	2	3	4	5
2.	Reexamines critical assumptions to question whether they are appropriate.	1	2	3	4	5
3.	Fails to interfere until problems become serious.	1	2	3	4	5
4.	Focuses attention on irregularities, mistakes, exceptions and deviations from standards.	1	2	3	4	5
5.	Avoids getting involved when important issues arise.	1	2	3	4	5

Continued

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
1	2	3	4	5

6. Talks about their most important values and beliefs.	1	2	3	4	5
7. Is absent when needed.	1	2	3	4	5
8. Seeks differing perspectives when solving problems.	1	2	3	4	5
9. Talks optimistically about the future.	1	2	3	4	5
10. Instills pride in being associated with him/her.	1	2	3	4	5
11. Discusses in specific terms who is responsible for achieving performance targets.	1	2	3	4	5
12. Waits for things to go wrong before taking action.	1	2	3	4	5
13. Talks enthusiastically about what needs to be accomplished.	1	2	3	4	5
14. Specifies the importance of having a strong sense of purpose.	1	2	3	4	5
15. Spends time teaching and coaching.	1	2	3	4	5
16. Makes clear what one can expect to receive when performance goals are achieved.	1	2	3	4	5
17. Shows that he/she is a firm believer in "If it ain't broke, don't fix it."	1	2	3	4	5
18. Goes beyond self-interest for the good of the group.	1	2	3	4	5
19. Treats me as an individual rather than just as a member of a group.	1	2	3	4	5
20. Demonstrates that problems must become chronic before taking action.	1	2	3	4	5
21. Acts in ways that build my respect.	1	2	3	4	5
22. Concentrates his/her full attention on dealing with mistakes, complaints and failures.	1	2	3	4	5
23. Considers the moral and ethical consequences of decisions.	1	2	3	4	5
24. Keeps track of all mistakes.	1	2	3	4	5
25. Displays a sense of power and confidence.	1	2	3	4	5
26. Articulates a compelling vision of the future.	1	2	3	4	5
27. Directs my attention toward failures to meet standards.	1	2	3	4	5
28. Avoids making decisions.	1	2	3	4	5

Continued

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
1	2	3	4	5

29. Considers me as having different needs, abilities and aspirations from others.	1	2	3	4	5
30. Gets me to look at problems from many different angles.	1	2	3	4	5
31. Helps me to develop my strengths.	1	2	3	4	5
32. Suggests new ways of looking at how to complete assignments.	1	2	3	4	5
33. Delays responding to urgent questions.	1	2	3	4	5
34. Emphasizes the importance of having a collective sense of mission.	1	2	3	4	5
35. Expresses satisfaction when I meet expectations.	1	2	3	4	5
36. Expresses confidence that goals will be achieved.	1	2	3	4	5

Part II Knowledge Sharing

This section is used to describe a firm's knowledge sharing related activities, especially in the strategic alliance setting. Please measure how your organization implements the sharing of knowledge within the organization and between the strategic alliance organizations. Please use the following rating scale to answer each item in the appropriate box. A strategic alliance is a voluntary arrangement between two or more firms to exchange, share, or co-develop products, technologies, and/or services. Firms may have a wide range of goals or motives for joining a strategic alliance. These alliances can come in a variety of different forms, and occur across both vertical and horizontal boundaries.

(Please think of the strategic alliance's organization that is most important to your organization)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

1. My organization focuses on the most valued customers and captures the knowledge from interactions (or "socialization") with customers.	1	2	3	4	5
---	---	---	---	---	---

Continued

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

2. My organization creates a workplace culture that is moving toward the customer-centric.	1	2	3	4	5
3. My organization develops enough appropriate repositories for knowledge collection.	1	2	3	4	5
4. My organization creates techniques for collecting and sharing the knowledge from customers and strategic alliance partners.	1	2	3	4	5
5. My organization applies the competitive knowledge created to problem solving and decision making.	1	2	3	4	5
6. My organization creates a process for managing customer data and translating data into knowledge.	1	2	3	4	5
7. My organization encourages employees to share their working experiences, such as their experiences in interacting with customers.	1	2	3	4	5
8. My organization transfers employees' working experiences into "resources" that can be used by employees.	1	2	3	4	5
9. My organization creates a place, such as a library, for employees to search for knowledge they need.	1	2	3	4	5
10. My organization's leadership supports the activities related to knowledge sharing.	1	2	3	4	5
11. My organization's employees receive new job related knowledge from job training programs or conferences.	1	2	3	4	5
12. In order to develop competitive products or services, my organization creates and shares knowledge with strategic alliance partners.	1	2	3	4	5
13. My organization regularly conducts meetings with strategic alliance partners for the purpose of communication and knowledge developing and sharing.	1	2	3	4	5

Continued

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

14. My organization and strategic alliance partners create a “community” that allows strategic alliance members to share and create knowledge.	1	2	3	4	5
15. My organization and strategic alliance partners have visited each regularly for the purpose of knowledge sharing and learning.	1	2	3	4	5
16. My organization creates a clear vision and strategic objectives.	1	2	3	4	5
17. My organization encourages employees to work together and share knowledge with our strategic alliance partners.	1	2	3	4	5
18. My organization has job training programs, conferences, or internal consulting for the purpose of knowledge transferring and sharing.	1	2	3	4	5

Part III Marketing Effectiveness

This section is used to measure the marketing effectiveness of an organization. Please use the following rating scale to answer each item in an appropriate box.				
Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

1. My organization’s marketing thinking is successfully communicated and implemented from the top down.	1	2	3	4	5
2. Management shows good capacity to react quickly and effectively to on-the-spot developments.	1	2	3	4	5
3. Management commits to marketing excellence.	1	2	3	4	5
4. Management is doing an effective job, and the marketing resources are adequate and are deployed efficiently.	1	2	3	4	5

Continued

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

5. Marketing management is working well with the management in other functional areas.	1	2	3	4	5
6. Management's focus for the organization is to be a good community neighbor.	1	2	3	4	5
7. Management recognizes the importance of designing the organization to serve the needs and wants of a chosen market.	1	2	3	4	5
8. Management develops different offerings and marketing plans for different segments of the market.	1	2	3	4	5
9. My organization monitors customer satisfaction.	1	2	3	4	5
10. My organization stimulates and monitors word-of-mouth communication.	1	2	3	4	5
11. Management takes a whole marketing system view (consists of competitors, customers, and environment) in planning business.	1	2	3	4	5
12. My organization contributes substantial effort to measure the cost-effectiveness of different marketing expenditures.	1	2	3	4	5
13. My organization regularly conducts marketing research on customers and competitors.	1	2	3	4	5
14. Management knows the sales potential and profitability of different market segments.	1	2	3	4	5
15. My organization develops a detailed annual marketing plan and a careful long-range plan that is updated annually.	1	2	3	4	5
16. My organization defines and communicates well the business to target customers.	1	2	3	4	5
17. The current marketing strategy is clear and innovative.	1	2	3	4	5
18. My organization focuses on long-term growth.	1	2	3	4	5

Continued

Part VII Demographic Questions

Please tell me about yourself:
Gender: I am <input type="checkbox"/> Male <input type="checkbox"/> Female
Age: I am _____ years old.
Education: My highest degree is <input type="checkbox"/> Associate <input type="checkbox"/> Bachelor <input type="checkbox"/> Master
Job Level in the Organization: I am: <input type="checkbox"/> Senior manager <input type="checkbox"/> Manager <input type="checkbox"/> Supervisor <input type="checkbox"/> Staff
Tenure: How many years have you worked for this firms? _____ Years

I really appreciate your help! Please write your comments in the following box.

APPENDIX B

INTEGRATED QUESTIONNAIRE CHINESE VERSION

敬愛的受訪者:

受訪者您好。首先感謝您撥冗填答此份問卷。如下之問題是用來研究專業服務組織 (Professional Service Firms) 在實施策略聯盟時，其領導行為、知識分享、和行銷績效間的關係。請依照您個人的實際感受來回答這些問題。這是一份純學術研究問卷，採不記名之方式，您的填寫僅供整體研究分析之需，您的隱私將會受到保護，絕不作個別披露，請您安心填寫。

感謝您的協助

敬祝 平安

中州技術學院企業管理系專任講師
美國諾瓦東南大學管理學院博士班研究生
陳立岳 敬上

第一部份：領導行為

如下之問題是想瞭解您在公司工作時，您對於您直屬上司的領導行為的看法，請依如下的量表來衡量您所描述的主管在如下 36 題項的頻繁程度。

從不	甚少	偶而	經常	頻繁地總是
1	2	3	4	5

1. 他(她)提供協助以換取我在工作上的努力。	1	2	3	4	5
2. 他(她)的觀念迫使我重新思考一些，我視為理所當然的想法。	1	2	3	4	5
3. 他(她)對問題事前沒有預防，導致變成棘手問題。	1	2	3	4	5
4. 他(她)專注於疏失及偏差之處理。	1	2	3	4	5
5. 他(她)當重大事情產生時，則避免介入此事情。	1	2	3	4	5
6. 他(她)會談論最重要的價值和信念。	1	2	3	4	5
7. 當我有需要他(她)協助時，但他(她)卻不在場。	1	2	3	4	5
8. 他(她)在解決問題時，尋找不同的方向及方式。	1	2	3	4	5
9. 他(她)樂觀地談論未來。	1	2	3	4	5

續頁尚有題目，謝謝！！

從不	甚少	偶而	經常	頻繁地總是
1	2	3	4	5

10. 和他(她)一起共事，令我感到驕傲。	1	2	3	4	5
11. 他(她)就事討論，並指派專人去達成目標。	1	2	3	4	5
12. 他(她)等待事情已出問題時，才出面解決。	1	2	3	4	5
13. 他(她)熱切地談論什麼事必須被達成。	1	2	3	4	5
14. 他(她)詳細說明事情的重要性，使我們能深刻地瞭解其事情之目的。	1	2	3	4	5
15. 他(她)願意花時間於傳授與指導上。	1	2	3	4	5
16. 他(她)清楚地讓員工知道，當何種績效目標被達成時，將會得到何種回饋。	1	2	3	4	5
17. 他(她)的信念是等待問題產生時才會去處理。	1	2	3	4	5
18. 他(她)是不為個人利益，而為團體利益的領導者。	1	2	3	4	5
19. 他(她)視我並不只是組織的成員之一而已，且非常關懷我。	1	2	3	4	5
20. 他(她)直至問題明顯出現時才有所反應。	1	2	3	4	5
21. 他(她)表現其個人風格，以建立我對主管的尊重。	1	2	3	4	5
22. 他(她)專注於員工的抱怨，及工作上錯誤與失敗的處理。	1	2	3	4	5
23. 他(她)下決策時，會考慮到道德與倫理。	1	2	3	4	5
24. 他(她)會針對所有工作上的缺失做追蹤。	1	2	3	4	5
25. 他(她)表現出一股權力與自信。	1	2	3	4	5
26. 他(她)善於勾勒對未來美好的遠景。	1	2	3	4	5
27. 他(她)專注於將失敗導向符合標準。	1	2	3	4	5
28. 他(她)避免作決策。	1	2	3	4	5
29. 他(她)考慮我與其他員工的不同需求、能力、和抱負。	1	2	3	4	5
30. 他(她)引導我從各種不同的角度端視問題。	1	2	3	4	5
31. 他(她)協助我發展出我的優勢。	1	2	3	4	5
32. 他(她)建議我新的完成工作的方式。	1	2	3	4	5
33. 他(她)對於緊急問題不急於展現反應。	1	2	3	4	5
34. 他(她)著重於使每個公司的成員具有強烈的使命感。	1	2	3	4	5
35. 他(她)會展現出他(她)的滿意，當我達到他(她)的期望時。	1	2	3	4	5
36. 他(她)對於目標將會被達成展現出一股自信。	1	2	3	4	5

續頁尚有題目，謝謝！！

第二部份：知識分享

如下 18 題項是用來描述組織內部和策略聯盟的知識分享相關活動。請衡量您所任職的公司，在組織內部和在策略聯盟中進行知識分享的實際情況。請依如下的量表來衡量您所描述的公司。所謂策略聯盟是指公司為達到某一目的(標)，而與其他的公司協議以互相交換或分享資訊或共同地發展產品或服務。如貴公司加入國際會計組織，成為台灣會員所。

非常不同意	不同意	沒意見	同意	非常同意
1	2	3	4	5

1. 我的公司專注於最具有利益價值的客戶上，並從與其互動中獲取顧客的知識。	1	2	3	4	5
2. 我的公司創造以顧客導向的組織文化。	1	2	3	4	5
3. 我的公司發展足夠的知識庫以供知識的搜集。	1	2	3	4	5
4. 我的公司具有向顧客和策略聯盟公司 (如國際會員所) 搜集與分享知識的技術。	1	2	3	4	5
5. 當具有競爭力的知識被建立時，我的公司會將其應用於問題的解決和決策上。	1	2	3	4	5
6. 我的公司具有管理顧客資料，並將其轉換為知識的程序。	1	2	3	4	5
7. 我的公司鼓勵員工分享工作經驗 (如與客戶互動之經驗)。	1	2	3	4	5
8. 我的公司將員工的工作經驗轉換為資源，以供員工使用。	1	2	3	4	5
9. 我的公司設立企業圖書館以供員工搜尋所需之資料。	1	2	3	4	5
10. 我的公司的領導階層支持鼓勵知識分享。	1	2	3	4	5
11. 公司的員工可藉由在職訓練或研討會來獲取與工作相關的新知識。	1	2	3	4	5
12. 我的公司與策略聯盟公司 (如國際會員所) 共同創造知識並分享知識以發展具競爭力的產品或服務。	1	2	3	4	5
13. 我的公司與策略聯盟公司定期舉行會議，以利工作的溝通和知識的發展與分享。	1	2	3	4	5
14. 我的公司與策略聯盟公司共同建立『平台』，以供策略聯盟成員進行知識的分享與創造。	1	2	3	4	5
15. 我的公司與策略聯盟公司 (如國際會員所) 定期互訪，以達知識分享與學習之目的。	1	2	3	4	5

續頁尚有題目，謝謝！！

非常不同意	不同意	沒意見	同意	非常同意
1	2	3	4	5

16. 我的公司建立清楚的遠景和策略目標。	1	2	3	4	5
17. 我的公司鼓勵員工與策略聯盟公司的員工共同工作並分享知識。	1	2	3	4	5
18. 我的公司有在職訓練計劃、研討會、或內部諮詢...等，以利知識轉移與分享。	1	2	3	4	5

第三部份：行銷績效

如下 18 題項是用來描述組織為達到高的行銷績效，所採行的相關活動。請衡量您所任職的公司，在如下 18 題項的實際情況。

非常不同意	不同意	沒意見	同意	非常同意
1	2	3	4	5

1. 公司的行銷思考成功地從高階層傳達至執行階層。	1	2	3	4	5
2. 公司的管理當局對市場狀況的發展具有迅速且有效的反應能力。	1	2	3	4	5
3. 公司的管理當局致力於優越的行銷表現。	1	2	3	4	5
4. 公司的管理當局能有效地處理行銷資源使其充分並作有效地運用。	1	2	3	4	5
5. 公司的行銷管理當局能和其他部門之間有效地合作。	1	2	3	4	5
6. 公司的管理當局致力於使公司成為當地社區的好鄰居。	1	2	3	4	5
7. 公司的管理當局已體認到需將公司設計成能滿足其所選定的市場之需要的重要性。	1	2	3	4	5
8. 公司的管理當局為不同的市場區隔，發展不同的產品組合與行銷計畫。	1	2	3	4	5
9. 我的公司重視顧客滿意。	1	2	3	4	5
10. 我的公司重視口語相傳的效果。	1	2	3	4	5
11. 我的公司的管理當局從整個行銷市場的角度（其包含競爭者、顧客、和環境等）來規劃其事業。	1	2	3	4	5
12. 公司的管理當局致力於衡量各種行銷支出水準的成本效益。	1	2	3	4	5
13. 我的公司定期地對顧客和競爭者動向進行行銷研究。	1	2	3	4	5

續頁尚有題目，謝謝！！

非常不同意	不同意	沒意見	同意	非常同意
1	2	3	4	5

14. 公司的管理當局對於不同的市場區隔的銷售潛力與獲利力相當清楚。	1	2	3	4	5
15. 我的公司發展一套行銷年度計畫，且每年更新周詳的長程計畫。	1	2	3	4	5
16. 我的公司向目標顧客清楚地定義和傳達我們的服務為何。	1	2	3	4	5
17. 公司的行銷策略是清楚的並具創新性。	1	2	3	4	5
18. 我的公司致力於長期的成長。	1	2	3	4	5

第七部份：基本資料

請回答以下所有之問題。您的資料僅供整體研究分析之需，您的隱私將會受到保護，絕不作個別披露，請您安心填寫。

性別： 男性 女性

年齡：我 _____ 歲

學歷：
我最高的學歷是：
 專科 學士 碩士

您目前的職稱為何：
 合夥人 副總經理 協理
 經理 副理
 主任 領組 Level 1 Level 2

您在事務所的年資：
_____ 年

您若對此問卷有任何建議，請將您寶貴的意見書寫下列的方框內

問卷到此結束，非常感謝您的填答！敬祝事業順利

APPENDIX C

PERMISSIONS FOR USING THE QUESTIONNAIRE

MLQ Multifactor Leadership Questionnaire

Duplication Set

(Leader and Rater Forms, and scoring
for MLQ 5x-Short)

Permission to reproduce either leader or rater forms for
up to 370 copies in one year from date of purchase:
February 25, 2004

by **Bernard Bass and Bruce Avolio**

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APPENDIX D

COVER LETTER TO RESPONDENTS
IN PILOT STUDY
BOTH CHINESE & ENGLISH

COVER LETTER IN PILOT TEST TO RESPONDENTS (CHINESE)

2003 年 12 月 10 日

敬愛的受訪者：

首先感謝您在公忙之餘來填寫此問卷。本研究的目的是在探討專業服務組織 (Professional Service Firms) 在實施策略聯盟時，其領導行爲、知識分享、和行銷績效間的關係。

您現在所填寫的問卷是預試用的問卷，其目的爲在發展出有效和可信的問卷以供本研究使用。請將完成填答的問卷交予 XXX 先生 / 女士。他(她)在本研究中受本人委託負責在貴公司進行問卷發放和回收。

再次感謝您對本研究的協助。若您對此預試問卷或本研究有任何問題或者建議，請將其書寫在問卷最後的建議欄中，或者將您的寶貴意見利用網際網路傳輸給我。我的電子郵件信箱是 liyuchen@nova.edu。

敬祝

平安

中州技術學院企業管理系專任講師
美國諾瓦東南大學管理學院博士班研究生
陳立岳 敬上

COVER LETTER IN PILOT TEST TO RESPONDENTS (ENGLISH)

December 10, 2003

Dear Respondent,

I am a full-time lecture of the Department of Business Administration, Chungchou Institute of Technology in Taiwan. Presently, I am working on the doctoral dissertation at Nova Southeastern University in Fort Lauderdale, Florida. My study is examining the relationships among leadership behaviors, knowledge sharing, and marketing effectiveness in professional service firms that have been engaged in strategic alliances.

In order to develop a reliable questionnaire for this study, a pilot study will be necessary. To complete this draft questionnaire, it will take you about 20 minutes. You will need to check your perception of the question on the appropriate box. Upon completion, please return the survey to Mr. / Ms. xxx who has responded as being a contact person to take care this pilot study in your firm.

I really appreciate your participation. Your participation will have tremendous benefit for this study. If you have any questions or comments for this draft questionnaire or this study, please don't hesitate to respond. You may just simply let the contact person know. Additionally, you may write your comment on the comment box which is found in the last page of questionnaire, or write me an email. I look forward to hearing comments from you.

Sincerely yours,

Li-Yueh Chen
16461 Racquet Club Rd.
Sandpiper 2 #501A
Weston, FL. 33326
liyuchen@nova.edu

APPENDIX E

**COVER LETTER TO CONTACT PERSON AND RESPONDENTS
IN FORMAL SURVEY
BOTH CHINESE & ENGLISH**

COVER LETTER IN FORMAL SURVEY TO CONTACT PERSON (CHINESE)

2004 年 1 月 26 日

XXX 先生/女士 您好：

首先感謝您在公忙之中抽空協助本研究。本研究的目的是在探討專業服務組織 (Professional Service Firms) 在實施策略聯盟時，其領導行爲、知識分享、和行銷績效間的關係。今檢附問卷 xx 份，請代爲發放。

爲達研究目的，請依下列原則發放問卷：

- (1) 請儘量平均地發放予各層級人員填寫。
- (2) 此問卷係純學術研究問卷，僅供整體研究分析之需，採不記名方式，敬請知會受訪者安心作答。

爲考慮本研究的時效性，請於 2 月 10 日 之前回收。回收後，請寄至如下地址：

台中市南屯區文心南一路 189 巷 1 號 408

最後再次感謝您的協助。

敬祝

平安

中州技術學院企業管理系專任講師
美國諾瓦東南大學管理學院博士班研究生
陳立岳 敬上

COVER LETTER IN FORMAL SURVEY TO CONTACT PERSON (ENGLISH)

January 12 2004

Dear Mr. / Ms. XXX

Thank you for agreeing to allow me to include your office in my doctoral dissertation study. I really appreciate your help. I am completing a doctoral degree at Nova Southeastern University in Fort Lauderdale, and am also employed as a full-time lecturer at the Chungchou Institute of Technology's Department of Business Administration in Taiwan. My study examines the relationships among leadership behaviors, knowledge sharing, and marketing effectiveness in professional service firms that have been engaged in strategic alliances.

The package you have received contains x questionnaires, x cover letters for respondents, x white envelopes, x red envelopes with dollars, and a stamped return envelope. Please distribute one of each to your colleagues. I do not need the red envelopes back; they are for your colleagues. According to Chinese tradition, the red envelope is a sign of good luck, so these red envelopes are given in appreciation to the respondents.

Lastly, I appreciate your assistance in collecting these questionnaires and returning them to me. I have asked respondents to return their questionnaires to you before February 10, 2004 because I am hoping to receive them back by February 12, 2004. I have enclosed a large, stamped envelope to return these questionnaires to me.

Again, I appreciate your help.

Sincerely yours,

Andy Li-Yueh Chen
Nova Southeastern University
H. Wayne Huizenga School of Business and Entrepreneurship
Carl DeSantis Building
3301 College Avenue
Fort Lauderdale, FL 33314
liyuchen@nova.edu

COVER LETTER IN FORMAL SURVEY TO RESPONDENTS (CHINESE)

2003 年 1 月 26 日

敬愛的受訪者：

首先感謝您在公忙之餘來填寫此問卷。本研究的目的是在探討專業服務組織 (Professional Service Firms) 在實施策略聯盟時，其領導行爲、知識分享、和行銷績效間的關係。在填答時，請依照您個人的實際感受來回答這些問題。爲考慮本研究的時效性，請於 2 月 9 日前完成此問卷。

請將完成填答的問卷交予 XXX 先生 / 女士。他(她)在本研究中受本人委託負責在貴公司進行問卷發放和回收。

再次感謝您對本研究的協助。若您對此問卷或本研究有任何問題或建議，請將其書寫在問卷最後的建議欄中，或者將您的寶貴意見利用網際網路傳輸給我。我的電子郵件信箱是 liyuchen@nova.edu。

敬祝

平安

中州技術學院企業管理系專任講師
美國諾瓦東南大學管理學院博士班研究生
陳立岳 敬上

COVER LETTER IN FORMAL SURVEY TO RESPONDENTS (ENGLISH)

January 12 2004

Dear Respondent,

I am a full-time lecturer at the Chungchou Institute of Technology's Department of Business Administration in Taiwan. I am also completing a doctoral degree at Nova Southeastern University in Fort Lauderdale. My study examines the relationships among leadership behaviors, knowledge sharing, and marketing effectiveness in professional service firms that have been engaged in strategic alliances. I really would appreciate your help by completing the attached questionnaire. All you need to do is check the box that best matches your perception of the item and return the questionnaire by February 10, 2004.

After you complete the questionnaire, would you kindly place the questionnaire in the attached white envelope and return to Mr. / Ms. XXX who has agreed to serve as a contact person for your firm. Please be assured that your responses are strictly confidential and that individual responses will not be identified.

Your participation will greatly benefit this study, and I much appreciate your time. In return, I will send you a copy of the full survey results. If you have any questions or comments about this questionnaire or my study, please do not hesitate to contact me at email address liyuchen@nova.edu. Also, feel free to write your comments in the comment box, which is found on the last page of the questionnaire.

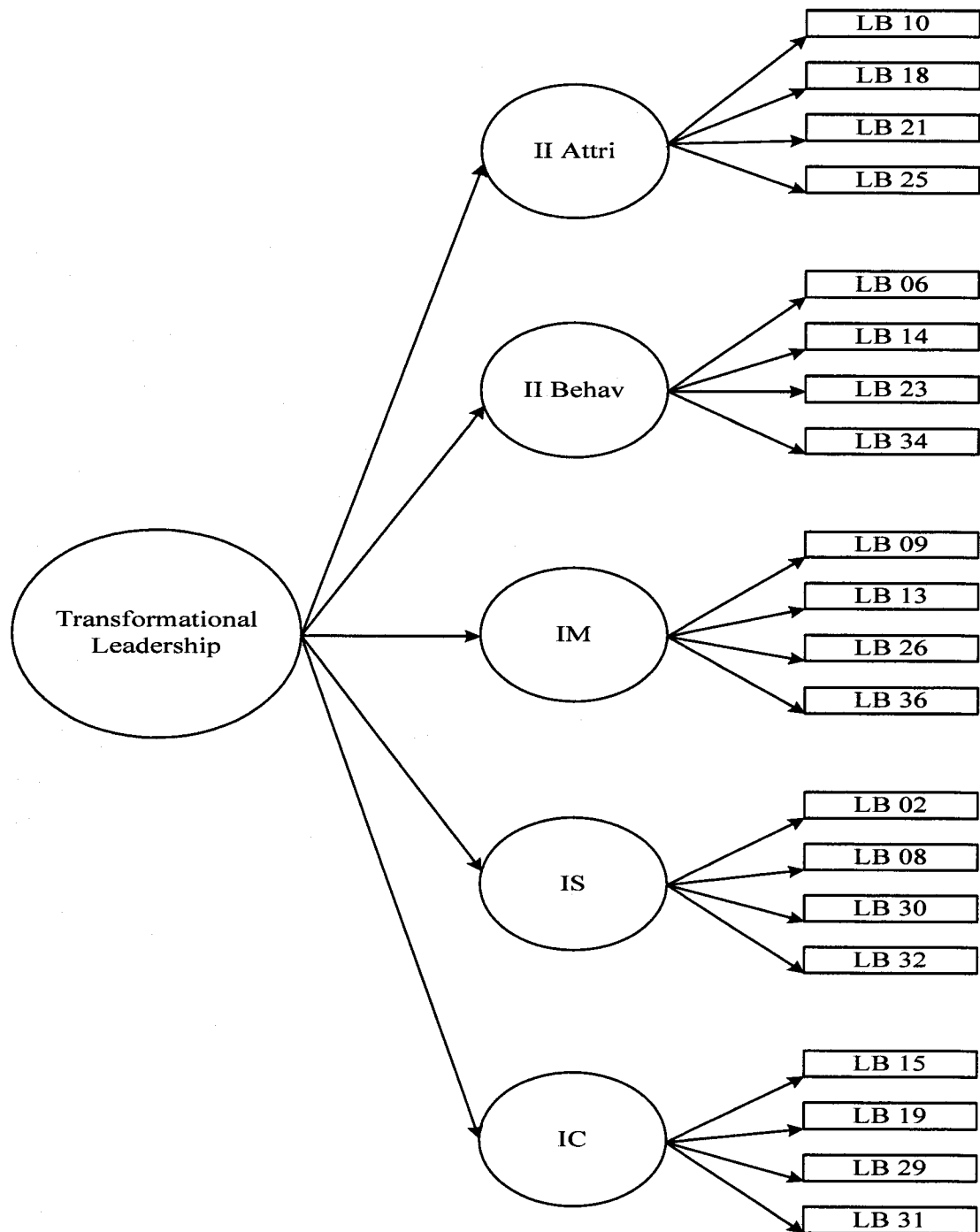
Thanks, ahead of time, for your assistance.

Sincerely yours,

Andy Li-Yueh Chen
Nova Southeastern University
H. Wayne Huizenga School of Business and Entrepreneurship
Carl DeSantis Building
3301 College Avenue
Fort Lauderdale, FL 33314

APPENDIX F

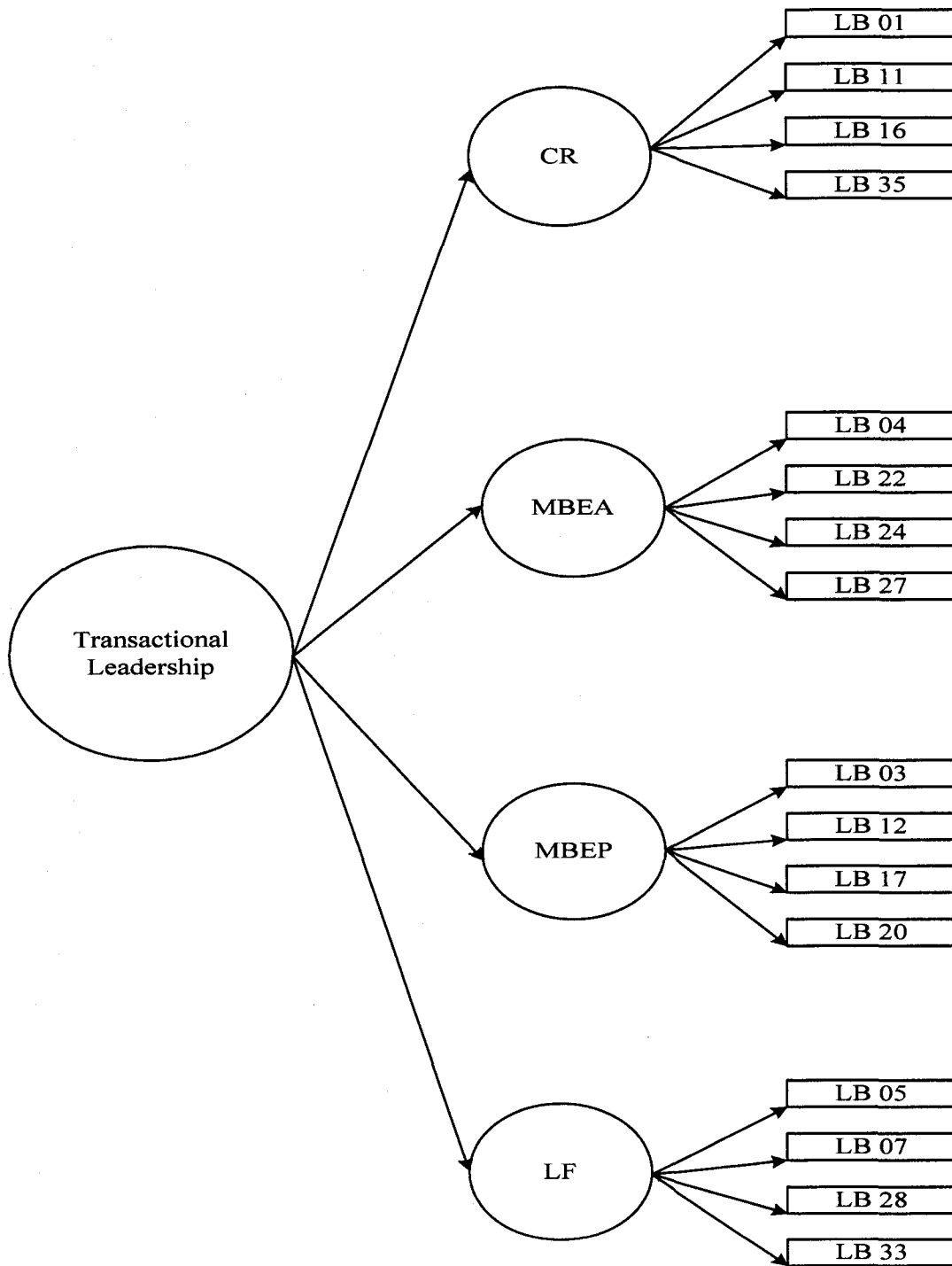
HIGHER-ORDER CONFIRMATORY FACTOR MODEL OF TRANSFORMATIONAL
LEADERSHIP



Note: Idealized influence attributed (IIA), idealized influence behavior (IIB), inspirational motivation (IM), intellectual stimulation (IS), individual consideration (IC)

APPENDIX G

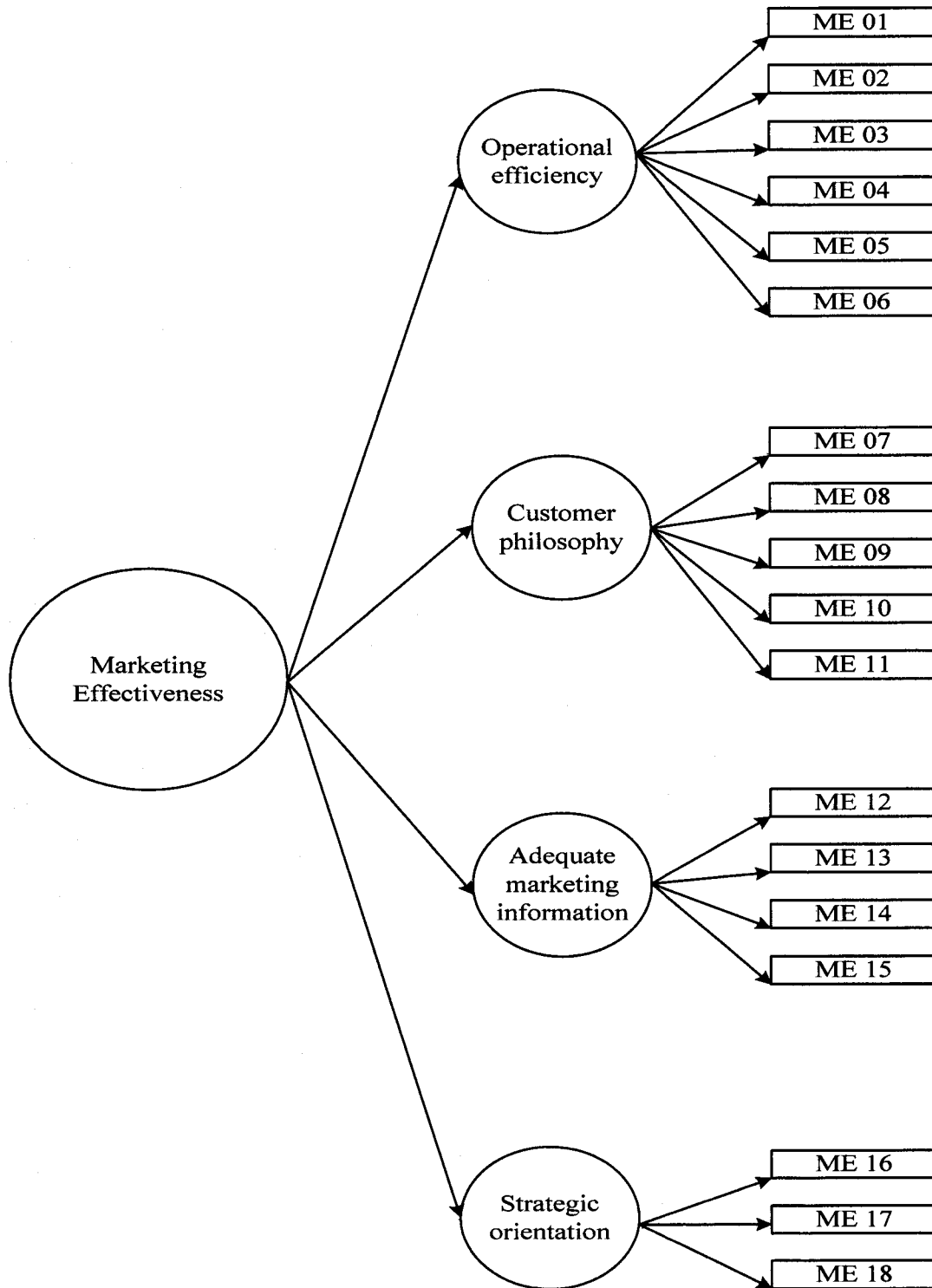
HIGHER-ORDER CONFIRMATORY FACTOR MODEL OF TRANSACTIONAL
LEADERSHIP



Note: Contingent reward (CR), management by exception active (MBEA), management by exception passive (MBEP), and laissez-faire (LF)

APPENDIX H

HIGHER-ORDER CONFIRMATORY FACTOR MODEL OF MARKETING
EFFECTIVENESS



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