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**STRATEGIC MANAGEMENT OF PROFESSIONAL SERVICE FIRMS:
Balancing the Demands
of Human Resource Management, Client Service, and Financial Performance**

by

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A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
(Business Administration)
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To my husband, David Brian Wooten,
For my parents, Charles and Deloris Perry,
And for my baby son, Justin David Wooten,
born as my pen hits the paper.

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CHAPTER I

INTRODUCTION

The single greatest challenge facing managers in the developed countries of the world is to raise the productivity of knowledge and service workers. This challenge will dominate the management agenda for the next several decades, and will ultimately determine the competitive performance of companies. Even more important, it will determine the very fabric of society and quality of life in every industrialized nation (Drucker, 1991).

Professional service firms (PSFs) have become an integral part of the economy of the United States.¹ This is evidenced by several statistics: (1) The professional service sector is growing faster than Gross National Product in the United States; (2) In 1990, total receipts in the professional service sector exceeded \$200 billion with employment at 2.3 million; and (3) The United States has a positive trade balance in professional services of \$4 billion (U.S. Department of Commerce, 1992). However, even though the professional service sector plays a significant role in the U.S. economy, management scholars understand little about the strategic behavior of PSFs (Eccles and Crane, 1987). The neglect of this area of research by organizational theorists is unfortunate, since PSFs differ from other types of firms (e.g., manufacturing, non-professional services, and retailing) and confront their own set of managerial problems.²

¹This dissertation study defines professional service firms (PSFs) as those firms whose primary activity is to sell or render advanced professional knowledge, such as accounting, architecture, consulting, or law firms.

²PSFs confront managerial differences from other organizations, because they are the ultimate embodiment of the familiar phrase -- "our assets are our people." The work of a PSF is also unique because it entails the application of knowledge learned from extensive training and experiences to a series of incrementally, different and complex situations (Howard, 1991). Lastly, the ownership and governance of PSFs add to their administrative challenges because ownership, management, and the production of work can all reside in the same individuals.

Much of past organizational theory research on PSFs focused on the conflicts arising between the goals of the professional and the organizational norms of bureaucracies (Montagna, 1968; Hall 1968; Sorensen and Sorensen, 1974; Organ and Green, 1981). This stream of research concludes that professionals in bureaucratic organizations must behave as employees, leaving their expectations of professional life unfulfilled; and consequently, this leads to job dissatisfaction and job migration.

Other researchers studied the managerial differences between PSFs and traditional industrial firms. Mintzberg (1978) describes the PSF as a decentralized organization where professionals hold the power and standardization is based on professional skills, in contrast to other organizational structures. Maister (1982) noted that professional services involve a high degree of client interaction and service customization -- characteristics which require PSFs to attract and to retain highly skilled individuals. PSFs, therefore, confront the managerial challenge of "balancing" the conflicting demands imposed by two markets: (1) the output market for its services and (2) the input market for its productive resources -- human capital.³

A more recent study found that the difficulties of implementing organizational change are exacerbated in PSFs since key powerholders cannot be mobilized to support the change through the use of hierarchy because of the

³Maister (1982) notes that other organizations (e.g., manufacturing firms) also face the challenges of balancing the demands of the labor and output markets. However, since the PSF's primary asset and product is human capital, it faces this issue more explicitly than other organizations.

diffused, collegial nature of the organization (Hinings, Brown, and Greenwood, 1991). As a result, PSFs desiring to successfully implement organizational change need a high degree of leadership that links the collegial authority system to a vision and rationale for change.

Other recent research explores the relationship between internal governance of PSFs and their strategic management practices (Greenwood, Hinings, and Brown, 1990). This study proposes that PSFs are partnerships where ownership, management, and operations are fused, and because of this the strategic process is one of negotiation, consensus building, and iteration, rather than one dictated by top leadership. Hence, implementing a strategic direction depends on widespread acceptance and professional conviction, rather than the PSF's manipulations of resources, rewards, and sanctions.

Statement of Problem to be Investigated

Despite these previous investigations, there is still little theoretical conceptualization or empirical research on the strategic management practices of PSFs. Eccles and Crane (1987) observe:

Nearly all management theory developed in this century has been based on research in manufacturing firms. Despite the general recognition that mature economies show a pronounced shift to service businesses, such organizations are vastly under-represented in the work of business policy and organizational behavior scholars. Professional service companies, such as law, consulting, accounting, advertising, and some financial services firms, have been especially ignored.

This omission of PSFs creates a void in the management literature, and therefore, we lack the understanding of effective management practices for organizations in the business of selling knowledge. PSFs are so unlike

manufacturing and retail service industries that a new base for success must be identified (Rajogopalan, 1993). In the past, the management practices of PSFs were not studied because they were thought to have only a peripheral role in the economy or were viewed "as parasites living off the real producers of steel, cars, etc." (Peters, 1992: 12).

However, in today's economy, most value added comes from professionals or knowledge workers. Professionals make up only 20% of the labor force in the United States, but contribute up to 40% of GNP (Reich 1989; Sass 1990). Already a typical manufacturer's payroll consists of 75 to 95% service sector and knowledge workers, such as information systems experts, designers, engineers, accountants, marketers, and trainers (Peters, 1992). In the future there will be little difference between tomorrow's factory and today's PSFs, since both can be considered "intellectual holding companies" with core strategy activities centered around knowledge (Quinn, 1992). Thus, the capacity to manage professionals and transform their intellect into a service or a group of services embodied in a product is fast becoming a strategic skill for this era.

Hence, this research is motivated by the belief that management scholars who study PSFs can begin to understand how in this knowledge revolution, high-performing firms utilize and organize their professionals to respond effectively to customers' needs and market changes. In addition, this study seeks to understand why some PSFs are more successful than others. Likewise, Sibson (1971) and Greenwood et al. (1991) acknowledge the need for future strategy research to explore how the organization and management

of PSFs affect multiple dimensions of performance, such as staff retention, profitability, sales growth, and innovation.

Dissertation Contribution

Noting these gaps in the corporate strategy literature, this dissertation begins to address this research vacuum by integrating literature from organizational theory, strategic management, and sociology to develop and to empirically test a model that explains how control and coordination mechanisms are associated with the high performance of PSFs.

More specifically, this dissertation seeks to accomplish three goals through the collection and multivariate analysis of survey data from PSFs. First, to explore what types of control mechanisms in PSFs resolve one of the foremost challenges of management -- getting members to behave in ways compatible with organizational goals. Second, to examine how once the individual goals are aligned with the PSF's goals, what types of coordination mechanisms are employed to achieve purposeful collective action among a diverse and heterogeneous group of organizational members. Third, to understand how control and coordination mechanisms influence three dimensions of performance in PSFs -- human resource management, client service, and financial earnings.

Why Control and Coordination Mechanisms?

In PSFs the most important assets are expertise, experience, and execution capability (Maister, 1992). Thus, success is determined by a PSF's ability to use human resources to convert its assets (expertise, experience, and

execution capability) into services more valuable to clients than the services of its competitors (Ulrich and Lake, 1990). Employing human resources as assets requires PSFs to design control and coordination mechanisms that create an environment in which organizational members work to their highest levels of ability to meet the needs of clients (Ouchi, 1984). Control mechanisms are the vital link in the management chain because they are significant in motivating human resources in PSFs. They create an environment where the inherent conflicts between the individual and the organization are transformed into cooperation that is in the best interest of both the company and the employee (Kunda, 1992).

This goal alignment is accomplished through the proper execution of control mechanisms which involves providing professionals with: (1) a clear understanding of what is to be done; (2) a motivation to see that it happens; and (3) a process to identify the degree of accomplishment (Tourangeau, 1981). Therefore, control mechanisms are pertinent in PSFs since the products and services are inextricably related to the intellectual capabilities of the professionals and their interpersonal effectiveness (Lorsch & Mathias, 1987). Then, by studying control mechanisms, we can begin to understand how PSFs succeed in channeling the energies of professionals in the direction of strategic goals (Pennings and Woiceshyn, 1987).

Control mechanisms only yield immediate gain in PSFs when accompanied by effective coordination mechanisms. This is because no matter how much effort an individual professional exerts toward organizational goals, he or she cannot deal effectively with all demands of every client. However,

one of the most complex problems in PSFs is to encourage employees to share and thus leverage their knowledge across the entire organization. Moreover, since knowledge is one of the few assets that grows exponentially when shared, the real value of knowledge comes from the collaboration process (Quinn, 1992; Peters, 1992). When professionals share knowledge with other colleagues, not only do the receivers gain information, but they also feed back questions, amplifications, and modifications, adding further value to the senders. As each receiving group learns and creates knowledge, the base itself grows exponentially.

Coordination mechanisms assist in the development of collaborative work environments in PSFs because they bring together the expertise of each professional by formalizing knowledge-sharing. In addition, coordination mechanisms help in solving the resource allocation problem through the synchronization of organizational activities and the accurate assignment of human capital to tasks (Milgrom and Roberts, 1992). Some other benefits of coordination mechanisms are that (1) bottlenecks can often be eliminated, (2) delays in communication can be avoided, and (3) the receipt of insufficient or inaccurate information can be eliminated (Thompson, Frances, Levacic, and Mitchell, 1991). Figure 1.1 summarizes the relationships between the principal research terms. It depicts control and coordination mechanisms as organizational processes employed to ensure that the skills and efforts of employees are directed toward achieving organizational goals, and these processes affect the PSF's performance.

High Performance of PSFs

High performance results in PSFs when control and coordination mechanisms are employed to maintain a balance between the demands of the client marketplace, the needs of human resources, and the economic goals of the firm (Sibson, 1971; Maister, 1982). In other words, successful PSFs are able to develop innovative, high quality client services, and achieve high levels of financial performance, while at the same time effectively recruiting, utilizing, and retaining highly skilled professionals (Lawrence and Dyer, 1983).

The appropriate control mechanisms lead to high performance by increasing goal alignment between a PSF and its employees. This, in turn, increases the PSF's human resource management performance. With increases in human resource management performance, professionals are more motivated to serve the client better and, consequently, the PSF achieves higher levels of financial performance (Maister, 1992). In comparison to control mechanisms, coordination mechanisms effectively and efficiently pool together the knowledge base of a PSF's human capital. With a collaborative work environment, professionals develop skills to serve clients better and the ability to create innovative services, and better client services result in a higher financial performance.

Figure 1.2 presents the conceptual model of this study by showing the relationship between a PSF's control and coordination mechanisms and superior performance. This diagram illustrates that the appropriate control and coordination mechanisms in a PSF lead to high financial performance by

emphasizing human resource management and client services.

Organization of Dissertation

This dissertation is organized in the following manner. Chapter II reviews the relevant literature that links control and coordination mechanisms to performance in PSFs. Chapters III and IV develop a framework from corporate strategy, organizational theory, and sociology that identifies the types of control and coordination mechanisms that determine high performance in PSFs - a tripartite concept entailing high levels of human resource management orientation, client service, and profitability. More specifically, Chapter III argues that success in PSFs results when control mechanisms are aligned with the attitudinal attributes of professionals, and Chapter IV proposes that because of the nature of professional work, certain types of coordination mechanisms lead to better client service and higher financial performance in PSFs. Chapter V describes a research design to empirically examine the theoretical models presented in the previous two chapters. Chapter VI discusses the results of the data analyses, and Chapter VII concludes the dissertation by discussing its potential contribution to the corporate strategy and organizational theory literature as well as to practitioners. In addition, Chapter VII suggests directions for future research.

CHAPTER II

SOCIALLY COMPLEX ORGANIZATIONAL RESOURCES

This chapter discusses the literature on the resource-based view of the firm. Resource-based theory, an emerging paradigm in the literature of organizational economics and strategic management, focuses on the linkage between a firm's internal resources and performance. Through the application of resource-based theory, Chapter II explores how control and coordination mechanisms develop and bring together socially complex organizational resources and how these types of resources are associated with different dimensions of performance in PSFs.

Resource-Based View of the Firm

As early as 1959, Penrose contended that the theory of the firm only explains price and allocation among different alternatives and does not explain the function of the firm or its growth. She concluded that firms are not only administrative units but also collections of "productive resources," the disposal of which is determined by management. However, Wernerfelt (1984) was the first to formally introduce resource-based theory to recent corporate strategy research by arguing that we should analyze firms from the resource side rather than the product side. He defined resources as tangible and intangible assets tied semi-permanently to a firm. His examples of firm resources included brand names, machinery, trade contracts, and the employment of skilled personnel. Extending Penrose's and Wernerfelt's research, Barney (1991) provides us with a more explicit definition of firms' resources: "all assets, capabilities,

organizational processes, firm attributes, information, knowledge, etc. controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness."

Furthermore, Barney (1991) proposes that for a resource to provide a firm with a sustained performance advantage over its competitors, the resource must be both heterogeneous and immobile. Firm resource heterogeneity recognizes that the resources of each firm are different. Firm resource immobility suggests that competing firms are unable to obtain resources from other firms. If each firm in an industry possesses the same resources or the ability to obtain resources from other firms, firms could easily conceive or replicate their competitors' strategies. However, when all firms implement the same strategy, they will improve performance in the same way and to the same extent. Hence, no firm would have a performance advantage over another.

With the assumption that firm resources are heterogeneous and immobile, resource-based theory also proposes that firm resources will only lead to sustained superior performance when resources are (1) valuable, (2) rare, (3) non-substitutable, and (4) cannot be imitated.

For a resource to be valuable, it must enable a firm to develop strategies that result in high sales, low costs, high margins, or the resource in other ways must have positive economic consequences to the firm (Barney, 1986a). The rarity attribute of a resource implies that the resource must be unique among current or potential competitors. Although a firm's resources may be valuable and rare, there can also be no other substitutes for the resource. When another firm can substitute its competitor's resource with an alternative resource, each

will have the ability to exploit similar strategies. Thus, there is no competitive advantage. For instance, a firm desiring to duplicate the skills of its competitor's employees may recruit employees with similar know-how, and even though a firm's employee knowledge base may be rare and valuable, if other firms can substitute strategic equivalents, this resource will not lead to a competitive advantage.

Lastly, for a resource to provide a firm with a performance advantage, it must be imperfectly imitable, or in other words, firms that do not possess the resource cannot obtain them (Lippman and Rumelt, 1982; Barney 1986b). A firm's resources can be imperfectly imitable for one or a combination of three reasons. First, since each firm has a unique history, some firms will be able to exploit their resources because of their age or place in time. "For example, a firm may build a reputation for quality (rather than buy one) by following a consistent set of production policies over some period of time" (Dierickx and Cool, 1989: 1506). In contrast to this example, in some situations a younger firm may have the ability to exploit its age as a resource because it may have more flexibility and a better aptitude for developing new products, since routines are not as well established (Williamson, 1991).

Second, a firm's resources are imperfectly imitable when causal ambiguity exists. Or, in other words, when the firm does not precisely understand the relationship between its resources and superior performance (Demsetz, 1973; Lippman and Rumelt, 1982). Causal ambiguity may result because the firm's resource is very complex or interdependent with other resources, and when this is the case, managers may only have an implicit

notion of why their firm is successful (Barney, 1991). However, if a firm does not fully understand the reason for its success, it is very difficult for competitors to imitate the resource. For instance, Grant (1991) notes that competitors find it difficult to duplicate the success of Disney's World and Disney's Land. He observes that it is not transparent (but instead ambiguous) as to how the Walt Disney corporation employs its knowledge from movie making, engineering, psychology, and other technical disciplines to create amusement parks.

A third reason that a firm's resources may be inimitable is that certain resources are social complex phenomena, "beyond the ability to systematically manage and influence (Barney, 1992: 110)." Replicating these socially complex phenomena becomes an obstacle for a firm's competitors because these resources are invisible, and in many instances, tacit (Itami and Roehl, 1987). Moreover, socially complex resources are embedded in the collective actions of an organization's members and may only work in a particular organization because of the mixture of personalities, shared values, organizational skills, and support systems (Nelson and Winter, 1982; Wilkins, 1989).

Figure 2.1 summarizes the relationship between the key terms used in resource-based theory. It depicts firm resources as both valuable and immobile and shows that valuable, rare, imperfectly imitable, and non-substitutable resources will lead to superior performance in firms.

Socially Complex Organizational Resources in PSFs

The prior section discussed the fundamentals of resource-based theory. More recent research extends these ideas by focusing on the relationship between socially complex resources and superior firm performance. Socially complex organizational resources are a special type of resource that enables an organization to conceive, choose, and implement effective strategies because of the values, beliefs, symbols, and interpersonal relationships possessed by individuals or groups in a firm.⁴ In a manner somewhat similar to Barney (1992), Itami and Roehl (1987) argue that these types of resources are the true source of superior performance because they are hard to imitate and are capable of simultaneous multiple uses serving as both inputs and outputs of business activities.⁵ A firm cannot use a worker in two offices at one time, but a successful reputation with customers can be used to promote more than one product or service. In addition to multiple uses of this reputation, this resource can behave as an output from prior products or as an input in the development of new products.

Control Mechanisms in PSFs and Socially Complex Resources

The value of socially complex resources depends on the context in which a firm operates since organizational actions and environmental elements are not

⁴Examples of socially complex organizational resources include organizational culture, teamwork, brand reputation, and trust among organizational members.

⁵Although Itami and Roehl (1987) use the terminology "invisible assets" instead of "socially complex organizational resources," Barney (1992) in his discussion equates socially complex organizational resources with invisible assets.

mutually exclusive but instead interconnected (Hrebrinak and Joyce, 1985). Therefore, successful strategic behavior entails aligning the firm's strengths and weaknesses with its external environment (Andrews, 1971; Porter, 1991). In the context of PSFs, control and coordination mechanisms help to bring together and to develop socially complex organizational resources so PSFs may conceive and develop effective strategies.

Control mechanisms are essential in developing socially complex organizational resources in PSFs because the objectives of professionals, different coalitions, and units will be only partially congruent (Kornhauser, 1963; Ouchi, 1979; Tosi, 1992). This is because individual professionals may be more concerned with their own personal needs, and different groups may have more loyalty to their professional specialty than to the organization (Goulder, 1957; Raelin 1985). Moreover, many professionals have no desire to function as organizational members since their past training has taught and rewarded them for autonomous actions, independent thinking, and competitive behavior (Hirschorn, 1989).

These problems of goal incongruence between the professional employee and its PSF employer can lead to negative outcomes. Miller (1967) argues that when the professional's needs conflict with the organization's goals, professionals will exhibit maladaptive or deviant behavior. This deviant behavior can manifest itself by the professional only doing his or her required work, pretending to exhibit busyness, focusing attention on outside interests, becoming truant, or perhaps even engaging in unethical practices (Raelin, 1986).

Control mechanisms resolve the conflict problem by creating an environment where organizational members are willing to work for the good of the organization, even if this work effort is not always justified by their personal economic or political rewards (Barnard, 1938). Barnard describes this behavior as the "willingness" of organizational members to contribute their efforts toward organizational goals, and this "willingness" in Barnard's perspective implies self-abnegation, the surrender of controlling personal conduct, and the depersonalization of action. However, the willingness to work towards organizational goals requires control mechanisms both to solicit individuals' efforts, and to ensure that each employee has faith in the fairness of the organization's management practices and its ability to notice and appropriately reward excellent contributions (Ouchi, 1980).⁶ Thus, organizational members spend little time worrying about their self-interest and work hard to make the organization succeed (Wilkins, 1989).

In PSFs control mechanisms develop socially complex organizational resources through the creation of values and beliefs (Wilkins, 1989). These values and beliefs guide employee behavior and provide employees with an intangible motivation to channel their efforts toward organizational goals. In addition, control mechanisms perpetuate organizational values and beliefs through selection procedures, training programs, reward systems, and retention policies.

⁶"Fair management practices" are evident when: leaders are perceived as working for the good of the organization rather than their own self-interests, management represents the best interests of employees, there are systems that recognize and remember the sacrifices of employees, and there are procedures to work out differences between individuals and groups (Wilkins, 1989).

Several researchers provide illustrations of how control mechanisms serve to harness socially complex organizational resources in PSFs. Maister (1985a), in his case studies, of PSFs finds that the critical ingredient to success in the most profitable and best managed PSFs is a remarkable degree of institutional loyalty and group effort. He cites as examples: Goldman Sachs' ability to gang-tackle problems; the work ethic of Lantham & Watkins' lawyers; and the strong sense of organizational identity held by accountants at Arthur Andersen. In these PSFs, the emphasis on employee loyalty and teamwork are sustained by control mechanisms that stress the importance of human assets since they constitute the majority of productive resources. Employee training is used not only for skill development, but also for socialization and for building the commitment of professionals to the PSF's client service mission. Compensation systems reinforce teamwork and encourage intra-firm cooperation. In addition to training programs and compensation systems, control mechanisms in these PSFs downplay status differentials between senior and junior members and instead work hard to involve junior members in firm affairs since their commitment is essential to the PSF's success.

Similar to Maister's research, Howard's (1991) qualitative study of a PSF uses egalitarian and collegial control mechanisms as an example of tools employed to develop socially complex organizational resources that emphasize high quality litigation work in the Jacobson & Brown law firm. Law firms are not the only example where egalitarian and collegial control mechanisms facilitate the development of socially complex organizational resources. Peters (1992), in his book *Liberation Management*, credits McKinsey & Company's

success in the consulting industry to control mechanisms that encourage egalitarianism, a collegial culture, employee dedication, and consensus decision-making, and because of these control mechanisms, McKinsey & Company is better equipped to work with their clients.

Coordination Mechanisms in PSFs and Socially Complex Organizational Resources

In PSFs control mechanisms assist in the creation of socially complex organizational resources through the reinforcement of employees' expectations and the nurturing of organizational values; they are even more effective when accompanied by coordination mechanisms. Likewise, five decades ago Barnard (1938) proposed that activities cannot be coordinated unless individuals are willing to make contributions to the organization by giving up some personal control of what they do.

With the appropriate control mechanisms in PSFs, coordination mechanisms develop interpersonal relationships and facilitate the pooling together of knowledge. Hence, coordination mechanisms result in professionals or groups who are not just preoccupied with their own interests, but instead are willing to work with others in the pursuit of the organizational objectives (Wilkins, 1989). This alignment of professionals and integration of their skills results in socially complex organizational resources because organizational members in PSFs cannot effectively do their jobs alone or in parallel ways (Cheng, 1977; Powell, 1992). Instead, they must work together and carry out their roles in ways that are contingent upon each others' inputs, relationships, and outputs, so that their contributions converge toward organizational goals.

The presence of these contingencies between work roles, or interdependence, constitutes the need for coordination in PSFs.

In the 1990s clients demand that their PSFs have the ability to provide the same services on both a national and global basis. Furthermore, "the increases in complexity and interdependence between professional specialties has resulted in clients expecting full services and industry-specific knowledge from their PSFs (Howard, 1992: 112). Thus, PSFs that employ coordination as a means for designing effective knowledge and experience sharing mechanisms will obtain a significant competitive advantage since they are better able to meet the client's demands (Maister, 1992).

Eccles and Crane's (1988) study of investment banks supports Maister's viewpoint. They found that investment banks employing high levels of coordination mechanisms were better able to turn the combined skills of their employees into innovative client services, and ultimately this led to higher profits. In each of their examples, the investment banks used coordination mechanisms to enhance the relationships between professionals, especially those working in different functional specialties, and to strengthen the PSF's knowledge of the client needs. For instance, Shearson Lehman Brothers coordinates their bankers through customer-focused units, with each client team consisting of various specialists, such as bankers, salespeople, traders, and research analysts. With this more flexible arrangement of client service, workers at Shearson Lehman Brothers can make the structural adjustments necessary to respond to customers in an effective and timely fashion.

In comparison, Smith Barney uses specialization as a coordination

mechanism by subdividing its investment banking function into geographical specialties, product specialties, and industry specialties. With this extensive specialization, Smith Barney's potential or present customers perceive that it has special expertise in doing certain types of deals or serving particular markets, and in the professional service business a reputation for specialization is an important competitive advantage (Howard, 1992).

Socially Complex Organizational Resources and Performance of PSFs

The previous sections in this chapter discussed how control and coordination mechanisms assist in the development of socially complex organizational resources in PSFs. Ultimately, these socially complex organizational resources will lead to superior performance in three areas -- human resource management, client service, and financial earnings.

Control mechanisms clarify employee's expectations regarding the fairness of organizational policies and establish shared values and beliefs that guide the behavior of employees. Moreover, control mechanisms create a uniform way for organizational members to think, perceive, and value the goals of the PSF (Ulrich and Lake, 1990). These socially complex organizational resources perpetuated, through control mechanisms, sustain employee commitment and motivation. Consequently, this leads to high levels of human resource management performance by: (1) generating organizational competencies through selection or development procedures; (2) reinforcing organizational competencies through reward systems; and (3) sustaining organizational competencies through training programs and long-term employee retention, and with superior human resource management performance, the PSF

is empowered with the ability to use organizational members to improve client service and financial performance.

In PSFs coordination mechanisms facilitate collaboration among organizational members, and collaboration is necessary since frequently clients will demand services that an individual professional cannot accomplish alone (Peters, 1992). Furthermore, in most instances a PSF's client is not buying an individual professional's service, but instead the client purchases the repertoires of skills possessed by the entire organization (Wholey, 1984). The collaborative work environment and the combined knowledge generated by coordination mechanisms develop socially complex organizational resources. With these resources PSFs can bring to bear whatever skills are needed to serve the client, regardless of where they are located in the PSF, and can create tools that assist in the development of innovative client services (Kanter, 1983; Eccles and Crane, 1988).

Chapter Summary

This chapter discusses the resource-based view of the firm and describes how a special type of firm resource -- socially complex organizational resources that are developed because of control and coordination mechanisms -- lead to superior performance in PSFs. Figure 2.2 recapitulates the ideas of Chapter II, depicting socially complex organizational resources as a latent intermediate construct between control and coordination mechanisms and PSF performance. Control mechanisms develop expectations and reinforce organizational values, and this creates socially complex organizational resources, such as employee

loyalty, commitment, and motivation. Coordination mechanisms bring together human resources and facilitate the pooling of knowledge. Thus, coordination mechanisms create socially complex organizational resources, such as cooperative work environments and interpersonal relationships. Figure 2.2 also shows how socially complex organizational resources lead to superior performance in PSFs by improving human resource management, client services, and financial earnings.

CHAPTER III

CONTROL MECHANISMS IN PROFESSIONAL SERVICE FIRMS

The purpose of this chapter is to review the interdisciplinary organizational theory literature that links control mechanisms with superior performance in PSFs and to propose a set of hypotheses that identify which types of control mechanisms lead to superior performance in PSFs. First, drawing from Etzioni's (1965) and Ouchi's (1977, 1980) research, this chapter describes types of control mechanisms and when their use is appropriate. Next, this chapter employs literature from sociology and organizational theory to describe why the management of professionals differs from the management of other types of employees, and these differences dictate which control mechanisms will be effective in PSFs. Finally, this chapter uses the transaction cost economics and organizational culture literature to propose that because of the characteristics of professionals, certain types of control mechanisms will develop socially complex resources and lead to superior performance in PSFs.

Types of Control Mechanisms

Etzioni's (1961) research classifies control mechanisms in work organizations as either utilitarian or normative. With utilitarian control mechanisms, "members contribute time and effort to the organization in a contracted exchange that requires little or no personal involvement" (Kunda, 1992: 243). Since there is no personal involvement and the work force is mainly concerned with maximizing material wealth, the firm uses economic power to elicit compliance to rules and regulations. Etzioni (1961) suggests

that utilitarian control mechanisms are frequently employed in organizations where the employees are predominantly blue-collar workers. The application of this form of control ensures the level of quality for production as well as fair treatment of the firm's property and prevents absenteeism and tardiness.

In contrast to utilitarian control mechanisms, normative control mechanisms attempt to elicit effort and direct behavior of organizational members by controlling their underlying experiences, thoughts, and feelings (Kunda, 1992). Under normative control mechanisms, organizational members act in the best interests of the firm, not just because of economic rewards, but also because they are driven by internal commitment, strong identification with organizational goals, and intrinsic satisfaction from their work. Examples that Etzioni (1961) provides where normative control mechanisms are commonly used include religious organizations, political groups, professional organizations, and hospitals.

Although Etzioni provides us with a typology of control mechanisms, he gives us little explanation as to why certain types of organizations use certain types of control mechanisms (Perrow, 1986). Extending Etzioni's research, Ouchi (1977) developed a framework to explain control mechanisms in organizations. As illustrated in figure 3.1, Ouchi's framework classifies control mechanisms as either behavioral or output and assumes that two factors determine what type of control mechanism will be employed -- (1) knowledge of the transformation process and (2) availability of output measures.

Before supervisors implement behavioral control mechanisms to guide subordinate actions, there must be an agreement or knowledge of the process

through which inputs are transformed into outputs. However, for output control mechanisms, there is no need to understand the transformation process, but reliable and valid measures of the desired outputs must be available. For example, a factory supervisor may use behavioral controls since he or she can observe employees; if employees behave appropriately, then the expected products should be manufactured. On the other hand, a manager of a sales department may not be able to observe the behavior of her group members, but she can measure the number of products sold by each employee. In some instances there is a poor understanding of the transformation process, and measures of output are ambiguous. In these circumstances, ritualized or normative controls are effective.

Professionals and Control Mechanisms

Understanding the characteristics of professionals is important when studying PSFs since they account for approximately 72% of a PSF's expense (Sibson, 1971). Also, professionals represent the essence of the operating core, accounting for about 49% of employees in PSFs (Sass, 1990). Moreover, the basic role of the other expenses and assets, such as support staff, computer facilities, and libraries, is only to assist professionals in their jobs (Mintzberg, 1979). As early as the 1960s, sociologists acknowledged the significance of professionals in PSFs and argued that control mechanisms should accommodate the attitudinal attributes of professionals (Miller, 1967; Montagna, 1968). Hall (1968) and Kerr et al. (1977) describe a professional as one who:

- o Gains *expertise* from prolonged specialized training in a body of abstract vocational knowledge and applies this expertise to discrete cases or projects.
- o Appreciates *autonomous* work and *self-regulation*.
- o Feels a *sense of calling or commitment* to his or her work and profession.
- o Sees herself as a public servant obligated to render *ethical services* without concern for self-interest and without becoming emotionally involved with clients.
- o *Identifies* not only with the formal organization he or she works for, but also associates with his or her external colleagues for ideas and judgement.

Given these characteristics of professionals, what types of control mechanisms can PSFs utilize to induce employees to pursue the company's objectives and facilitate the development of socially complex organizational resources?

Ouchi's (1979, 1980) research provides us with a theoretical basis for examining this question. He expanded the typology he originally developed in 1977 by applying transaction cost economics and identifying three mechanisms of control in organizations: (1) markets or output controls, (2) bureaucracies or behavioral controls, and (3) clans or normative controls.⁷ Transaction cost economics assumes organizations exist to efficiently mediate relationships between individuals and to solve the problems of opportunism among exchange partners since individuals have only partially overlapping goals (Williamson, 1975). If individuals are left to their own devices, they will pursue incongruent objectives, and their efforts will be uncoordinated.

⁷Although markets, bureaucracies, and clans control mechanisms are three distinct concepts, any combination or different degrees can be present in real organizations (Ouchi, 1980). Figure 3.1 depicts the typology Ouchi developed in 1977.

Therefore, organizations with economic goals must find a means to efficiently control diverse individuals through creating an environment that encourages cooperation. This cooperative action involves interdependence between individuals, and interdependence entails an exchange or transaction in which each individual gives something of value (such as labor) and receives something of value (such as a salary or prestigious position) in return. In addition to exchanging something in an interdependent relationship, each party must believe the transaction is equitable and meets the standard of reciprocity (Gouldner, 1961). In turn, the demand for equity results in transaction costs - - the expenses of negotiating, monitoring, and enforcing the exchange between parties.

Control mechanisms are employed to minimize transaction costs and to maximize efficiency in organizations. When market control mechanisms are used to minimize transaction costs, employees are offered specific incentives for accomplishing clearly articulated standards (Quinn and Hall, 1983; Ulrich and Lake, 1990). The organization's policy of setting goals and reinforcing with rewards guides the behavior of employees. Market control mechanisms are effective when: clear performance standards can be established and monitored, an individual's performance can be linked to organizational outcomes, and most of the organization's transactions are infrequent and short-term. In most organizations, market control mechanisms will be ineffective when the organization's environment becomes more complex or uncertain because individuals are limited in their information processing ability. Thus, the costs of using market control mechanisms to govern each transaction will be

too high (Williamson, 1975; Ouchi, 1979).

PSFs and Bureaucratic Control Mechanisms

Because of the failure of market control mechanisms, bureaucracies and clans are the two forms of control mechanisms most often used in PSFs. Bureaucratic control mechanisms make use of rules and procedures to direct employee behavior. In bureaucracies, authority figures are guided by rules which are reinforced through organizational procedures. Also, hierarchy and specialization are tools used to monitor employee behavior and to ensure that organizational members work toward common goals (Quinn & Hall, 1983). Employees believe in the fairness of the exchange process since they have learned that long-term relationships will reward good performance and punish poor performance (Ouchi, 1980). This belief in equity reduces opportunistic behavior and monitoring costs. Hence, transaction costs are minimized.

In PSFs bureaucratic control mechanisms rely on formalized systems, close supervision, authority by rank, and rigid rules to govern the behavior of employees. However, the attitudinal attributes of professional workers predisposes them to resist bureaucratic control mechanisms (Etzioni, 1961; Von Glinow, 1988).⁸ Professionals wish to make their own decisions and believe they can work independently and autonomously without the pressure to follow the guidance of rigid rules or supervisors (Hall, 1968). This is because professionals believe their expert status, gained from prior training and

⁸Earlier in this chapter, the attitudinal attributes of professionals were described in detail. These include expertise, autonomy, commitment, identification, and ethics (Kerr et al., 1977).

professional certifications, gives them the privilege to decide the precise agenda of their work. The principal reason for this is that professional training emphasizes an independence of judgment when applying one's technical skills (Raelin, 1985).

Furthermore, professionals do not think they should be subjected to the standards set by bureaucratic control mechanisms. Instead, they prefer to use standards of their outside reference group or associations since many professionals believe that the standards of bureaucratic control mechanisms only stress efficiency, and such standards defy the service ethic ingrained in them from training and socialization into their profession (Scott, 1965). In many instances, professional training instructs students that their first obligation is to serve the client, and because of this it does not emphasize following rigid rules and procedures established as control mechanisms in organizations.

In addition to rules and standardization, bureaucratic control mechanisms discourage any reference group orientation except to the organization itself. Instead, it provides employees with identification, and new members need only to learn, adjust or take the role cast for them (Edwards, 1985). However, many professionals have a stronger identity with their external colleagues and peers than with the organization that employs them (Gouldner, 1957). Professional education encourages solitary peer groups and confirms the professional with a distinctive field (Abrahamson, 1967). Furthermore, a variety of shared experiences and expectations, such as disciplinary actions for unethical behavior by professional groups, conferences, jargon, and rites of

passage (e.g., examinations, boards, and clinical trials) reinforce a professional's identity with his colleagues. Therefore, professionals are not always satisfied with the economic rewards or discipline of bureaucracies and need additional recognition and evaluation from their professional colleagues and associations.

In summary, the manner in which bureaucratic control mechanisms seek to control employee behavior and attitudinal attributes of professionals result in conflict. Bureaucratic control mechanisms employ supervision, rules, and standardization to direct the behavior of employees. Yet, the professional's training and expert status have socialized her to be autonomous, self-regulating, and committed to her profession. Because of these conflicts, bureaucratic control mechanisms often do not develop socially complex organizational resources in PSFs but result instead in competitive disadvantage (Ouchi, 1980; Wilkins & Ouchi, 1983).

Maister (1992) contends that in PSFs bureaucratic control mechanisms lead to a work force that is not fully motivated, and consequently, the resulting lower productivity and quality decreases marketplace success. Thus, bureaucratic control mechanisms defeat their own purposes by increasing, instead of decreasing, the differences between the professional and organizational goals. Furthermore, because of the attitudinal attributes of professionals and the nature of his work, the transaction costs of utilizing bureaucratic control mechanisms will be exorbitant and ultimately outweigh the benefits (Jones, 1983).

Williamson (1975) identifies goal incongruence and performance

ambiguity as major sources of high transaction costs. In PSFs employing bureaucratic control mechanisms, goal incongruence develops because both the professional and the PSF have the incentive to promote their own interests at the expense of the other, since the expected returns from competitive behavior exceed the returns of cooperative behavior, leading to high transaction costs. Also, in PSFs, bureaucratic control mechanisms will give rise to high transaction costs because the input or output of professional work is too difficult to monitor through traditional bureaucratic means (Jones, 1983; Wilkins & Ouchi, 1983). This is because most professional work is non-routine, non-observable, and lacks performance measures, except in the case of negative output performance, such as number of patient deaths among doctors or lawsuits lost by lawyers.

In PSFs, bureaucratic control mechanisms will lead to high transaction costs because of goal incongruence and lack of performance measures for professional work. Hence, the high costs of inefficiently monitoring professionals will decrease the PSF's financial earnings, and the PSFs will fail to employ control mechanisms as tools in developing socially complex organizational resources. The negative consequences of bureaucratic control mechanisms result because potential and present employees of the PSFs will become disgruntled with the PSF's human resource management policies. If potential employees are aware of the conflict between professionals and management policies, the PSF's recruitment capability decreases, while the expense of hiring increases (Ulrich and Lake, 1990). Moreover, the goal incongruence between the PSF and its professional staff will decrease

employee satisfaction and motivation. With low levels of employee satisfaction, commitment and productivity decrease, while employee turnover increases. With voluntary employee turnover, a PSF incurs the costs of employee replacement and does not reap the full benefits of training and development efforts invested in employees (Sheridan, 1992).⁹

Given these conditions it is hypothesized that:

Hypothesis 1: PSFs employing high levels of bureaucratic control mechanisms will have low levels of financial performance, and this relationship will be mediated by the PSF's lower human resource management performance.

Figure 3.2 illustrates the failure of bureaucratic control mechanisms to create socially complex organizational resources in PSFs because of goal incongruence between professionals and the PSFs and the nature of professional work. Goal incongruence encourages opportunistic behavior. This, in turn, raises the costs of control mechanisms employed to negotiate, monitor, and enforce the exchange relationship between the PSF and its employees. Furthermore, with the use of bureaucratic control mechanisms by the PSF, the professional becomes dissatisfied with the PSF's human resource management policy, and employee productivity declines. Thus, with higher transaction costs and lower employee productivity, financial performance will be negatively affected by bureaucratic control mechanisms.

⁹In some PSFs, such as large accounting firms, turnover of low performers is a desired goal of their human resource management policy. The professional earns the certification needed in his profession, and the PSF gets labor at a low cost. However, Sheridan's (1992) argument is that PSFs which emphasize bureaucratic control mechanisms have higher unwanted employee turnover.

PSFs and Clan Control Mechanisms

Ouchi (1980) contends that organizations, like PSFs, confronted with the problems of goal incongruence or ambiguous performance measures, will search for an alternative to bureaucratic control mechanism to minimize transaction costs. Ouchi's proposed solution to this dilemma is clan control mechanisms.

Whereas bureaucratic control mechanisms rely on rigid rules, close surveillance, and hierarchical rank to guide employee effort, clan control mechanisms rely on goal congruence, shared values, and strong feelings of solidarity to minimize transaction costs. In firms using clan control mechanisms, solidarity and union of objectives binds organizational members, and this solidarity between individuals stems from their necessary dependence upon one another (Durkheim, 1933).¹⁰

In a manner somewhat similar to Ouchi (1980) and Durkheim (1933), Barnard (1938) speaks of organizations employing control mechanisms comparable to clans as a means to establish goal congruence among organizational members. He describes these organizations as employing subtle, intangible control mechanisms based on solidarity and social integration, with comradeship and mutual support in personal attitudes as tools to cultivate and to reinforce goal congruence. In addition, clan control mechanisms utilize a variety of social mechanisms to reduce the differences between individuals and

¹⁰Ouchi (1980) points out organizations lacking market or bureaucratic control mechanisms are not necessarily does not make them "loosely coupled" or "organized anarchies." Instead, clans provide great regularity of relations and can be more direct than other explicit types of control mechanisms or contractual relationships.

organizational goals and produce a strong sense of community, including: (1) a guiding shared-paradigm that entails collective ideas on matters such as how to organize work, ways of regarding customers, and the image of products; (2) a belief that shared efforts are the best way to realize one's own interests; and (3) an expectation that both honest and dishonest people will be treated in the long run as they deserve (Wilkins and Ouchi, 1983; Alvesson and Lindkvist, 1993).

In the case of PSFs, since clan control mechanisms coincide with both the professional's needs and the PSF's goals, opportunism is unlikely, and equity can be achieved at relatively low transaction costs (Ouchi, 1980). The socialization from prior professional training and the standards of the profession reinforce shared values and commitment, thus reducing the cost of clan control mechanisms to the PSF. While at the same time, the focus of professional training and standards provides professionals with a culture that emphasizes collegiality and legitimacy to external professional organizations (Jones, 1983). Early in a professional's education, solidarity peer groups develop, and she legitimizes her membership in these groups through membership in professional associations and by earning titles (Raelin, 1985).

In PSFs an emphasis on collegiality and professional legitimacy serves to assist in the development of efficient clan control mechanisms since the PSF can adopt the existing professional culture with minimal socialization costs (Wilkins and Ouchi, 1983). Supporting this perspective, Etzioni (1961) contends that in PSFs, the major means of control are based on prolonged and careful selection and socialization by universities and apprenticeships.

Operative (technical, functional, work-related) rules and regulatory rules are internalized by the professional worker through formal education and its accompanying socialization process. Thus, as a consequence, professional norms are, as a rule, highly internalized prior to the professional's employment, so normative control mechanisms are highly effective in PSFs.

Since the external population in which PSFs recruit new members is somewhat homogeneous, the socialization costs associated with clan control mechanisms are low and this results in higher levels of organizational efficiency and effectiveness. When PSFs use clan control mechanisms, they are more dependent than bureaucracies on high levels of similarity between the PSF's orientation and the orientation of certain external professional associations. Therefore, clans are more likely to be concerned with external legitimacy of the PSF with respect to certain critical publics since professional codes of ethics and professional associations reinforce social bonds and ultimately control professional behavior (Etzioni, 1961). Clan control mechanisms also encourage professionals to share and develop their expertise with other professionals in the firm since the frequent contact reinforces shared organizational values.

Moreover, clan control mechanisms assume that organizational members can work autonomously and substitute close supervision with the belief that employees are a trusted community of equals who cooperate with one another to reach common goals (Kanter, 1972). This is because clan members exhibit a high degree of discipline. However, this discipline is not achieved through contractual relationships or surveillance, but "through an extreme form of the belief that individual interests are best served by complete immersion of each

individual in the interests of the whole" (1972: 41).

For PSFs clan control mechanisms develop socially complex organizational resources by fulfilling the professional's self-actualization needs and hence maximizing his or her contribution to the PSF (Ouchi, 1981). Argyris (1964) argued that motivation in work will be maximized when each employee pursues individual goals and experiences psychological growth and independence. He believed the close supervision associated with bureaucratic control mechanisms diminishes motivation and retards psychological growth and that personal autonomy is necessary for an individual's psychological success. In contrast to bureaucratic control mechanisms, more humanistic control mechanisms, such as clans, encourage a climate of trust and provide an opportunity for autonomous behavior. In this environment, the professional has more control over her work, and this satisfies her self-actualization needs (Ouchi, 1981a).

Hence, clan control mechanisms provide a balance between the professional's needs and the PSF's goals, resulting in commitment to the organization's mission and success (Raelin, 1985). This is accomplished by establishing control mechanisms that complement the attitudinal attributes of professionals, and, because of this, professionals are more committed to their work and more motivated to see the PSF succeed in its goals (Maister, 1992).

Furthermore, the shared-paradigm created by clan control mechanisms ensures that employees will make decisions that are consistent with the PSF's overall goals and, to some extent, replaces close supervision, thus leading to increases

in productivity and supportive work relationships (Wilkins, 1989).¹¹ The increase in the PSF's overall productivity is achieved because the shared-paradigm: (1) inspires people to work toward organizational goals; (2) encourages different groups within the PSF to cooperate; and (3) prevents the PSFs from drifting into unprofitable ventures.

Although empirical studies on clan control mechanisms are scarce, a few ethnographic studies illustrate how when managing professionals, clan control mechanisms promote the development of socially complex organizational resources. Kanter (1983), in her studies of a highly professionalized computer firm and a medical equipment company, links their financial success to control mechanisms that create "emotional and value commitment between person and organization; in these companies people feel that they belong to a meaningful entity and can realize cherished values by their contribution" (p. 149). The clan control mechanisms used in these two organizations energize employees and permit them to venture beyond their normal work roles to tackle meaningful issues, because workers experience a "high" that "may be the closest to an experience of community or total commitment for many workers, an almost communal process brought to the corporation" (p. 203). From her research, Kanter concludes that when organizations employ control mechanisms, such as clans, the company excels in its industry because of the time, money, and energy invested in human resources.

¹¹Previously in this section, the notion of shared-paradigm was discussed. The shared-paradigm created by clan control mechanisms implies that organizational members believe that: shared efforts are the best way to realize one's own interest; and both honest and dishonest people will be treated in the long-run as they deserve (Wilkins and Ouchi, 1983).

Kunda's research (1992) presents another example of how control mechanisms aligned with the employee's social, emotional, and psychological needs motivate work efforts and affect firm performance. His research focused on professionals working in an engineering division of a high-technology company -- identified by the pseudonym Tech. Kunda and external stakeholders of Tech credit its competitive success to heavy employee involvement and strong emotional bonding of the individual to the company, which has a work environment that stresses autonomy, informality, and minimal status distinctions. Clan control mechanisms in this engineering firm create a strong sense of commitment, resulting in professional employees who make decisions and behave in the best interests of the company.¹² There is no need for strict and rigid bureaucratic control mechanisms. Instead, productive work is the result of control mechanisms which promote self-direction, initiative, and emotional attachment, and ultimately, the organization's interest in productivity and the professional's interest in growth and personal development are combined.

In relationship to this study, both Kanter's (1983) and Kunda's (1992) research on the management of professionals demonstrates how clan control mechanisms not only produce high levels of employee involvement and commitment, but also professionals who are intrinsically satisfied from their

¹²Although not all of Tech workers are professionals, clan control mechanisms are mainly used for professional employees. Non-professional workers or support staff are subjected to utilitarian or bureaucratic control mechanisms based mainly on economic incentive, and temporary workers are governed by coercive control mechanisms, subjected to immediate termination and have no employee rights.

work. This is because there is an alignment of the organization and the professional's goals (Etzioni, 1961).

Thus, when a work environment provides intrinsic satisfactions, such as the ones described by Kanter (1983) and Kunda (1992), exists in PSFs, it improves the PSF's human resource management performance by enhancing its ability to compete in the "input market" for its productive resource -- the professional work force and to retain these highly skilled individuals (Maister, 1982, 1992). Furthermore, clan control mechanisms in PSFs minimize transaction costs by building a governance structure that matches the transaction characteristics between the professional and the PSF (Ulrich and Lake, 1990). Because of improvements in a PSF's human resource management performance and the minimization of transaction costs, PSFs employing clan control mechanisms will ultimately experience higher financial earning, deriving from transaction cost savings and better human resource management.

Therefore, based on the theoretical support and empirical evidence provided in this section, it is hypothesized that:

Hypothesis 2: PSFs utilizing high levels of clan control mechanisms will have high levels of financial performance, and this relationship will be mediated by the PSF's human resource management performance.

Figure 3.3 illustrates the theoretical relationship between clan control mechanisms and performance in PSFs. It shows that clan control mechanisms will succeed in PSFs since they establish goal congruence by coinciding with the attitudinal attributes of professionals and the PSF's goals, thus minimizing

transaction costs. The goal congruence produced by clan control mechanisms develops socially complex organizational resources, such as consensus, commitment and employee loyalty, and the end result of the development of these socially complex organizational resources manifests itself in the PSF's human resource management performance and financial earnings.

PSFs and Intrapreneurial Control Mechanisms

Despite its strengths, clan control mechanisms possess a few potential weaknesses. For instance, clans tend to fear outsiders and resist deviance in all forms. "Since the glue that holds clans together is consistency of beliefs rather than the application of bureaucracy, clan members tend to indiscriminately reject all inconsistency" (Ouchi 1981b: 75). This can become problematic because clan members will not possess the ability to discriminate in advance between a deviant idea that is innovative and adaptive and one that is useless. Murray (1989) proposes that top management groups employing clan control mechanisms may interact more efficiently when competition is intense, but they have trouble adapting to environmental changes. In addition to these weaknesses, clan control mechanisms can hinder professionalism. Although clans place great emphasis on hiring the most skilled professionals, once professionals enter the organization, the focus is on reinforcing shared values, team work, and loyalty. For instance, Maister (1985a) contends that PSFs using clan-like control mechanisms may become complacent, lacking in entrepreneurship, entrenched in their ways of doing things, and inbred.

Because of these weaknesses, Murray (1989) argues that in changing

environments, such as the competitive environment of many PSFs, supplemental control mechanisms are needed that encourage innovation and adaptability.¹³ In PSFs the innovation process involves generating new methods for traditional tasks or extending knowledge in new areas (Heydebrand and Noell, 1973). This demands that the PSF create a work environment where professionals can identify, develop, and implement new ideas (Kanter, 1988).

Intrapreneurial control mechanisms facilitate the innovation process in PSFs by encouraging professionals to behave as internal entrepreneurs or intrapreneurs. With the utilization of intrapreneurial controls, professionals have an opportunity to choose and work on their own projects with only minimal bureaucratic constraints (Raelin, 1985). The central emphasis of intrapreneurial control mechanisms is directed autonomy or empowerment (Kanter, 1983; Waterman, 1987). With directed autonomy, the organization creates a work environment that allows professionals to take responsibility for developing their ideas into services or products. Professionals are not only encouraged, but also rewarded for: (1) thinking in unique and independent ways; (2) taking moderate risks, and (3) tackling challenging tasks. At the same time, management tolerates missteps when well-intentioned efforts fail to work out as planned.

The use of intrapreneurial control mechanisms reconciles the differences between professional goals and organizational goals since the characteristics

¹³Howard (1991) argues that in the nineties, PSFs confront a changing competitive environment. Many professional service industries now advertise, but there is a lack of product differentiation. Clients are more willing to shop around for the lowest price and best services. In addition, clients demand industry-specific skills and a wide array of services from their PSF.

of the entrepreneur and the professional coincide with each other. Similar to many professionals, entrepreneurs are highly motivated individuals with innovative ideas, desiring to be their own boss (Kelley, 1985). Moreover, professionals perceive themselves as entrepreneurs who sell their knowledge and skills. In the past, when most professionals worked as private entrepreneurs, there was ample opportunity to satisfy their developmental needs (Edwards, 1985). Although large PSFs provide the access to colleagues, technology, and financial resources, they can impede risk-taking and creativity because the professional is not always given the freedom to pursue new projects (Raelin, 1985). However, intrapreneurial control mechanisms in PSFs take advantage of the professional's desire to act as an entrepreneur by encouraging professionals to use their expertise to develop new services to sell to clients. Supervision is replaced with top management empowering the professional with the tools needed to make decisions, to take initiative, and to experiment (Kanter, 1985).¹⁴

Three factors contribute to the success of intrapreneurial control in PSFs. First, research indicates that professionals employed by PSFs and given the freedom to act as entrepreneurs are more productive because the nebulous nature of their work requires flexibility and creativity (Vollmer and Mills, 1966; Mills, Hall, Leidecker & Margulies, 1983). Furthermore, this higher level of productivity can be attributed to the fact that professionals who are

¹⁴Kanter (1983) suggests employees need three basic tools for empowerment: information (data, technical knowledge, political intelligence, and expertise); resources (funds, materials, space, and time); and support (endorsement, backing, approval, and legitimacy).

intrapreneurs have more freedom in selecting the jobs they work on and how they do them (Kornhauser, 1962). Second, empowered professionals can implement their ideas through processes within the organization, and this is beneficial because PSFs that do not provide this freedom confront the risk of professionals stealing clients when they leave to start their own PSF (Kelley, 1985). However, many professionals are satisfied with working for their employer if the PSF will only allow them the opportunity to experiment with new projects, grow professionally, and share in its wealth. Third, when the necessary resources or tools are readily available for professionals, productivity increases, because she does not have to exert energy acquiring these resources and instead can focus her attention on client services (Kornhauser, 1962; Kanter, 1983).

The use of intrapreneurial control mechanisms enhances several other dimensions of a PSF's human resource management performance in addition to employee productivity. Kelley (1985) argues that without intrapreneurial control mechanisms in PSFs, employee turnover will increase. This is because in the long-term, professionals are not willing to work in an environment where they are powerless and cannot implement new ideas, and instead they will become dissatisfied and look for career opportunities that provide the resources needed to develop their ideas. Moreover, intrapreneurial control mechanisms facilitate professional development by encouraging professionals to try new approaches to assignments or by training them in business development (Raelin, 1985). Also, intrapreneurial control mechanisms are positively correlated with employee satisfaction in PSFs since professionals sense that

their desires to behave as entrepreneurs are encouraged and rewarded.

The improvement in the PSF's human resource management performance, due to intrapreneurial control mechanisms, will positively affect the PSF's financial earnings by increasing sales and profitability (Peters, 1992). This is because intrapreneurial control mechanisms develop socially complex organizational resources in PSFs since individuals close to the action are empowered to innovate. This facilitates more efficient ways of doing business, the development of new services, and the pursuit of new markets or clients, leading to higher financial performance (Kanter, 1983; Schuler, 1986). Hence it is argued that:

Hypothesis 3a: PSFs using high levels of intrapreneurial control mechanisms will have high levels of financial performance, and this relationship will be mediated by the PSF's human resource management performance.

Finally, intrapreneurial control mechanisms permit professionals to better serve clients. Corporate entrepreneurs are the ones who translate strategy into practice (Kanter, 1983). Although top executives may provide general directives to open new markets, develop innovative services, or improve quality, these strategies mean nothing without the ability of the relevant professionals and their initiative. Furthermore, the professionals working closely with clients have their fingers on the pulse of operations and can see, suggest, and set into motion new ideas that top executives may not have considered.

For example, top executives in investment banks, such as Kidder

Peabody and First Boston, report that eighty to ninety percent of new products come from entrepreneurial professionals while they are working with clients (Eccles and Crane, 1988). David Maister, professional service industry expert, in his interview with Reich (1988: 79) points out that "many of Wall Street's greatest business triumphs, such as Drexel Burham domination in the junk-bond market, were not the product of methodical planning, but rather the result of entrepreneurial initiatives boosted, at some point, by the PSF's willingness to 'bet big'." Professionals in these investment banks are innovative because the resources necessary for innovation flow freely; they are encouraged to scan the external environment for new ideas; and employees are rewarded for new product development. So, in many instances, it is not only the initiative and enterprise of a PSF's employee who designs the ways to improve operations or new services, but it is also the control mechanisms that encouraged this behavior that determines the degree of innovation in client services and the PSF's profit potential (Greenwood et al., 1990). In PSFs, client innovation increases the PSF's profit potential since it allows PSFs to differentiate their services from competitors by offering client services that are presently not being offered by other PSFs (Gordon, Corsini, and Fetters, 1985).

Therefore, it is hypothesized:

Hypothesis 3b: PSFs that employ more intrapreneurial control mechanisms are more focused on designing innovative client services, and as a result, will have high levels of financial performance.

Figure 2.4 represents the relationship between intrapreneurial control mechanisms and the three dimensions of performance in PSFs: (1) human

resource management performance, (2) client services, and (3) financial performance. It illustrates that because of the weaknesses of clan control mechanisms, intrapreneurial control mechanisms serve as supplemental control mechanisms that provide professionals with the autonomy to develop their ideas into new services. With this freedom to innovate, professionals are more productive and proficient in serving clients, and this positively impacts the PSF's financial earnings.

Chapter Summary

This chapter presents theoretical evidence from sociology and organizational theory to propose that control mechanisms develop socially complex organizational resources when aligned with the attitudinal attributes of professionals (Raelin, 1985). Therefore, this chapter proposes that encouraging professionals to improve their performance purely on the behalf of PSF is a losing battle, since most employees will satisfy their self-interests before the PSF's goals (Williamson, 1975). Control mechanisms act as a medium to resolving the self-interest dilemma by not only encouraging employees to work toward organizational goals, but also by ensuring that employees will be rewarded fairly for their contributions.¹⁵ However, in the case of PSFs, employing bureaucratic control mechanisms conflicts with the professional's interest and PSF's goals; hence the costs of bureaucratic control

¹⁵Rewards can be intrinsic or extrinsic. Professionals prefer a combination of both types of rewards. Intrinsic rewards are generated by the individual or the work itself. These include responsibility, meaningful work, alignment with organizational purpose, and personal development. In comparison, extrinsic rewards are those generated outside the individual and his or her work. They can be tangible, such as wages, profit-sharing plans, or fringe benefits, or intangible, such as participation in decision-making or praise from a superior (Kelley, 1985).

mechanisms will outweigh any benefits. Thus, this study argues that in PSFs clans and intrapreneurial control mechanisms will result in higher levels of human resource management performance, innovative client service, and financial earnings. This is because these two types of control mechanisms facilitate goal congruence between the PSF and organizational members, creating an environment where employees maximize their efforts and are rewarded appropriately for this effort.

CHAPTER IV

COORDINATION MECHANISMS IN PROFESSIONAL SERVICE FIRMS

The previous chapter discussed the importance of control mechanisms in developing socially complex organizational resources in PSFs. Although the appropriate control mechanisms are significant determinants of a PSF's successful performance, coordination mechanisms are just as important in the development of socially complex organizational resources. Therefore, by integrating research from organizational theory and describing types of coordination mechanisms, this chapter examines why coordination mechanisms are important in organizations, and more specifically to PSFs. In addition, it develops a group of hypotheses that argues that the use of certain types of coordination mechanisms in PSFs assists in the development of socially complex resources, and the one by-product of these resources is improved client services, which leads to higher financial earnings for the PSF.

The Importance of Coordination Mechanisms

Coordination involves the management of interdependence in work situations and represents the extent to which various parts of an organization function with regard to the needs and requirements of the other parts and the total system (Georgopoulos and Mann, 1962; Khandwalla, 1977). In other words, coordination mechanisms align, synchronize, or link together different parts of an organization to accomplish a collective set of tasks (Van de Ven and Delbecq, 1976). In many situations, organizational members cannot complete their tasks alone or in parallel ways, and instead they must carry out their roles

in a manner that is contingent upon each other's inputs, relationships, and outputs (Georgopoulos and Mann, 1962). Thus, coordination mechanisms become a necessity in organizations when the efforts, skills, information, or decisions of more than one person are needed to accomplish an objective because they link together various individuals, groups, and departments (Bradach, 1992).

With the presence of interdependence in organizations, the efforts and contributions of individual members would be ineffective and meaningless unless they are coordinated and made to converge toward the achievement of organizational goals (Cheng, 1985). This implies that the various roles, skills, and activities in an organization must be synchronized -- made to come into play at the appropriate time and place and in a certain order. In addition to grouping and synchronizing individuals together to accomplish a task, coordination mechanisms also ensure that there is not a wasteful duplication of effort among workers (Milgrom and Roberts, 1992). Because of the significance of managing interdependency in organizations, "coordination represents a major, on-going organizational problem whose successful resolution is essential to the effective functioning of every organization" (Cheng, 1985: 28). Examples of coordination mechanisms include hierarchies that manage relationships across organizational levels; data bases that facilitate communication or information dispersion; and multidisciplinary teams that work on projects together.

Coordination Mechanisms and Socially Complex Organizational Resources

The ability of a firm to coordinate its resources is a high-order organizational skill, regarded as valuable but scarce, that enables the firm to develop socially complex organizational resources (Lawrence and Lorsch, 1967; Barney, 1992; Powell, 1992). This is because each firm is a collection of discrete but interrelated economic activities, e.g., research and development, production, and marketing (Porter, 1991). Therefore, an essential part of a firm's strategy involves defining configurations for its activities and how they interrelate with each other. A firm's success in the marketplace will result from its ability to coordinate its activities at lower costs than its competitors or in a unique manner so that the firm can command premium prices for its products or services.

Consequently, the appropriate coordination mechanisms can enable a firm to develop and maintain key skills, such as high quality customer service, innovation, or expertise in a particular market segment because of the firm's socially complex organizational resources, or, more specifically, the interpersonal relationships possessed by individuals or groupings of organizational members (Wilkins, 1989). Many organizational skills consist of tacit understandings based on relationships among a number of people. Because of the tacitness of organizational skills, few members, if any, understand all that a firm's collective skill entails. Instead, much of an organization's skills are embedded in individuals and become intuitive and habitual to these individuals (Nelson and Winters, 1982). Skills become

collective through group interactions and interpersonal relationships facilitated by coordination mechanisms. Thus, coordination mechanisms are formal and informal systems that encourage the right people to work together to produce the right collective skills (Wilkins, 1989). Furthermore, coordination mechanisms prevent the eroding of organizational skills by ensuring that relationships between key people do not become strained and that structural or geographical isolation does not make contact between key people difficult.

The Significance of Coordination Mechanisms in PSFs

In the case of PSFs, creating and perpetuating collective organizational skills through coordination mechanisms is a very critical capability that determines superior performance (Quinn, 1992). This is because a PSF is a repository of intellect, and its client service performance, which will ultimately affect its financial earnings through increases in sales or lower costs, depends on its ability to transform the collective skills of its human resources into services needed by clients (Maister, 1992). Coordination mechanisms assist PSFs in this transformation process not only by structuring individuals into specialty groups or interdisciplinary teams so that knowledge capabilities are leveraged across the entire PSFs, but also by ensuring that if the individuals in these groups do not have the necessary skills needed to serve the client, they know whom to contact.

Hence, when coordination mechanisms are used in PSFs, professionals move beyond the mind set of working solely independently on projects and instead work in an environment where professionals are interdependent (Quinn,

1992). This is to the client's advantage, since instead of just having a small team servicing the client, the PSF can bring to bear the full force of the entire organization (Quinn, 1992).

The benefits reaped from coordination mechanisms in PSFs are two-fold. First, interpersonal relationships developed within groups encourage the development of in-depth knowledge in specialized areas, such as industry or functional specialties, and this in-depth knowledge can be dispersed to other groups in the PSFs (Peters, 1992). Second, through coordination mechanisms that link together different departments of a PSF and encourage contact with external stakeholders, a multiplicity of viewpoints are brought together. This cultivates "cross-fertilization" in PSFs, the ability of professionals to come together from different backgrounds and utilize their professional expertise and creativity to form unique, innovative client services that combine functional specialties (Kanter, 1983; 1988).

Given the potential benefits of coordination mechanisms to PSFs, what factors determine if the appropriate coordination mechanisms are employed to create socially complex organizational resources?

Determinants of Coordination Mechanisms in PSFs

Researchers identify task complexity and interdependence as the two most important determinants of coordination mechanisms in organizations (Thompson, 1967; Galbraith, 1973). Task complexity varies by organization and depends on the type of work, the number of products the firm produces, and the number of different input resources, or technical specialties, needed to

produce these products (Galbraith, 1973). The tasks of PSFs, although standardized, are often very complex because of the information-processing demands placed on workers (Mintzberg, 1979; Purser and Pasmore, 1992). Professional work is described as complex because it is the custom application of expertise and learned skills to diagnose clients' problems and to develop solutions for these problems (Sass, 1990). This entails gathering information through interviews or reading, analyzing and interpreting this information, and making written and oral reports to clients and colleagues.

Hence, the task of diagnosing and solving clients' problems in PSFs becomes a complex, intertwining process of creating, applying, and preserving knowledge for the purpose of helping to remove uncertainty from a relevant decision or course of action (Purser and Pasmore 1992; Starbuck, 1992).¹⁶

For example, a lawyer's work can involve applying existing knowledge obtained from research, analyzing, interpreting, and emphasizing precedents set in previous cases to solve a client's problem. In other types of work done by PSFs, it is difficult to distinguish between creating, applying, and preserving knowledge. A lawyer may be more successful if he or she reinterprets precedent cases imaginatively or conceives original strategies to win a client's case.

In addition to the creation and application of knowledge, professional work almost always entails the preservation of knowledge -- giving meaning to

¹⁶Purser and Pasmore (1992) contrast this type of work to routine work. In routine work, the level of uncertainty in task performance is not reduced through the performance work. For instance, building the one-thousandth and first car on the assembly line does not reduce the uncertainty of the task more than building the one thousandth.

old knowledge by relating it to current problems. For instance, many research-oriented PSFs have their staffs perform elaborate literature searches before developing solutions for client problems. Once these solutions are obtained, their relevance is highlighted by past research findings.

The second determinant of coordination mechanisms is the degree of task or resource interdependence in the organization. Task interdependence refers to the extent to which individuals or groups are dependent upon each other to accomplish their jobs. When tasks are interdependent, the satisfactory completion by one department will consequently influence whether the other departments can effectively accomplish their tasks and whether overall organizational goals can be attained (Cheng, 1985). The degree of task interdependence depends on characteristics of the work flow (Thompson, 1967). If the work is pooled interdependently, the various tasks are independent from each other and each task provides a discrete contribution. Hence, there is little need for coordination. However, the completion of sequential and reciprocal tasks is dependent upon other departments and requires the exchange of large amounts of information.¹⁷ Thus, there is a need for some type of coordination mechanism to synchronize work activities.

There is an extensive interdependence of tasks performed in PSFs because the work can be sequentially or reciprocally interdependent. In some

¹⁷When a task is sequentially interdependent, there is a time-dependent sequence, so that some activities must be performed before others can. In comparison, when tasks are reciprocally interdependent, the outputs of each become the inputs for others (Thompson, 1967). Thompson believed that the three levels of coordination build upon each other. Therefore all organizations have pooled interdependence; more complicated organizations have sequential as well as pooled interdependence; and the most complex have a combination of reciprocal, sequential, and pooled interdependence.

PSFs, the work involves sequentially interdependent tasks, such as audit work in public accounting firms, where the partner-in-charge of an audit engagement cannot attest to the fair presentation of the financial statement until a staff member has verified the dollar amount of each balance sheet and income statement account (Montagna, 1974). In other PSFs, the work is reciprocally interdependent. For example, in advertising firms, the information gathered by the research department regarding the appropriate consumers to target is input for the media and creative departments (Ogilvy, 1983). Once these departments know the targeted consumers for a product, they can make decisions regarding which messages will influence the target population and which media channels (television, radio, print, etc.) will best reach the targeted consumer.

Differentiation in PSFs

PSFs employ division of labor and its complement, specialization, as a coordination mechanism to manage task complexity (Georgopoulos and Mann, 1962). These coordination mechanisms control for task complexity by separating human resources based on their contribution to the organization, geographical location, work processes, or clientele served (Thompson, 1967). When a PSF's tasks are simple, little internal differentiation is required to process the knowledge needed for these tasks (Purser and Pasmore, 1992). The sole proprietor of an accounting firm may be able to handle all aspects of processing her clients' tax returns. However, as tasks become more complex and diverse in PSFs, there is a need for differentiation. In contrast to the sole

proprietor who handles all aspects of her work, a larger accounting firm may not only have departments dedicated to tax services, but also departments that can handle other accounting-related problems, such as audit, information systems, and consulting.

Differentiation is a coordination mechanism that organizations use to manage task complexity because: (1) individuals are limited in knowledge, foresight, skills, and time, and (2) these physical limitations affect the rate and amount of information one can store, retrieve, and process without error (Lawrence and Lorsch, 1967; Simon 1957). Therefore, differentiation overcomes the limitation of any one individual's thinking by helping people in organizations to process complex information and make decisions related to competition, products, customers, technology, and regulation (Lawrence and Dyer, 1983).

Differentiation involves the use of specialized individuals and units to bring various skills and orientation to a problem (Lawrence and Dyer, 1983). These specialized units assist the organization in dealing with their various external stakeholders, such as customers or regulatory bodies. Because of their prior education, past experiences, and the nature of their tasks, these different units develop specialized working styles, cognitive orientation, and mental processes. This specialization helps in dealing with complex tasks and limits the amount of information each individual or department is responsible for processing.

The Advantages of Differentiation in PSFs

Because of the task complexity in PSFs, differentiation allows the PSF to better serve clients and improve its financial position. Differentiation provides benefits because the PSF can focus on establishing expertise in specialized areas; this allows the PSF to develop a diversity of skills so it can effectively meet the clients' demands (Sibson, 1971). For instance, Eccles and Crane (1988) found in their studies of investment banks that the advantage of differentiation included more efficient processing of deals and greater knowledge of markets, which assisted the investment banks in improving pricing accuracy and reducing risks. This differentiation in investment banks also facilitated the formation of small units with strong group identity. Furthermore, it created an external perception by customers that the firm has special expertise in doing certain types of deals or serving particular market segments. "In a professional service business, a reputation for being particularly good at certain deals or serving particular market segments is an important competitive advantage" (Eccles and Crane, 1988: 127).

Similar to Eccles and Crane's study, other studies emphasize the significance of differentiation in PSFs. Stinchcome and Heimer's (1988) research examined the importance of differentiation in PSFs. They found successful PSFs in the business of developing software were specialized by function or industry, and, because of this specialization, exhibited unusual client service abilities. In these PSFs, specialized skills evolved naturally as individuals and groups concentrated on specific projects or streams of

innovation. These specialized skills helped the PSFs to market their services to specific target markets and avoid head-on competition.

Stevens (1981), in his research on the public accounting industry, found that the major source of revenue comes from audit, in contrast to tax or management advisory services. However, in the larger public accounting firms, there is even a need for high levels of differentiation within the audit function, such as by industry or firm size, since "the greater number and more complex bodies of knowledge required will make it more difficult for a single individual to maintain competence in all areas of accounting" (Steven:176). Moreover, with competition increasing in the audit industry and with partners desiring to meet clients' demands for a broader range of services beyond traditional audit service, public accounting firms have realized the need to broaden their scope of practice. This requires that a public accountant firm recruit representatives of other disciplines into its ranks (i.e., lawyers, engineers, actuaries), since many of these services are beyond the knowledge scope of traditionally trained certified public accountants (CPAs).

In summary, differentiation is a critical coordination mechanism in PSFs, since a PSF can better serve clients by acquiring the expertise to specialize around a specific task, market, or discipline (Peters, 1992). The expertise and specialization resulting from differentiation gives the PSF an extra degree of credibility, which is important when selling professional services (Starbuck, 1992). This is the case since clients not only purchase the actual service from the PSF, but also buy the PSF's credibility and confidence (Sibson, 1971). The purchase of confidence and credibility implies that the client believes the PSF

of their choice will apply its advanced knowledge to diagnose the correct problem and use the appropriate method to resolve the problem.

Also, differentiation allows PSFs to distinguish their services from their competitors' services because each subunit can manage its different task environment.¹⁸ Hence, the PSF has more flexibility in bringing expertise to client projects. Moreover, the better client service skills developed from differentiation improves the firm's financial position, since the PSF increases its capability to retain present clients and attract new clients (Gordon et al., 1985). Furthermore Maister (1985b) asserts that PSFs with high levels of client service skills resulting from differentiation can command higher fees than a generalist PSF, since differentiation convinces clients that the PSF is one of the very few to turn to with complex and critical problems. This is because clients of PSFs are not willing to pay a premium for routine diagnostic and judgmental services. However, a PSF can charge above-normal fees when it is truly a superior service provider in a particular area of expertise.

Therefore, it is hypothesized:

Hypothesis 4: PSFs employing differentiation as a coordination mechanism will have high levels of client service skills, and this results in high financial earnings.

Integration in PSFs

The task complexity of PSFs not only requires differentiation, but it also

¹⁸For example, in an advertising firm, the research department may need to be knowledgeable about the latest techniques used to collect and analyze market data. In contrast, the media department needs to keep abreast of the most effective communication channels to broadcast advertising.

necessitates integration -- coordination mechanisms that control for interdependence among work groups and facilitate teamwork. Integration is the usage of coordination mechanisms to manage interdependence among groups and achieve a unity of effort to meet environmental demands (Lawrence and Lorsch, 1967; Lawrence and Dyer, 1983).

High levels of differentiation in PSFs necessitate integration because subunits may develop a myopic focus on their work and overlook the overall organizational goals (Kanter, 1983, 1988). When professionals are grouped by specialization, they spend most of their time with other professionals like themselves who share their beliefs and assumptions. This insulates them from the work and ideas generated by other groups, and communication between fields will become difficult or excessively formal. In addition to communication problems, departments can become very territorial over resources, and they will lose all desire to share their resources with other departments.

Integration mechanisms resolve the problems arising from differentiation in PSFs and facilitate the achievement of organizational goals by helping various groups see what they have in common and why they need to cooperate with each other (Wilkins, 1989). In certain circumstances, a coordination mechanism is employed to reduce conflict and isolation between organizational units (Galbraith, 1973). In PSFs, the integrating coordination mechanism frequently used to reduce conflict and isolation between organizational units is job rotation. For investment banks, job rotation through the various departments builds the employee's knowledge of the different aspects of the business and helps her to establish contacts in various departments that she

can call upon when there is an interdepartmental conflict or a problem beyond her department's scope (Eccles and Crane, 1988).

In addition to conflict and isolation reduction, the knowledge gained from integration by job rotation provides the professional with an understanding of how the various departments of an organization fit together and contribute to the firm's overall strategy. Team work, the matrix organizational structure, and departmental liaisons are other examples of integration mechanisms that encourage interfacing across departments.

Other types of integration mechanisms in PSFs create systems for the exchange of information, skills, and new ideas across organizational boundaries. The business service firm Arthur Andersen & Company utilizes a sophisticated electronic mail system to leverage the intellectual capital of its PSF (Quinn, 1992). Each professional has access to a computer and is obliged to sign onto the electronic mail system at least once a week. The outcome of this integration mechanism is that professionals are able to learn from and share their knowledge with peers in different departments and geographical locations. In addition to electronic mail systems to exchange information across functions, PSFs also use such mechanisms as training seminars and newsletters to convey information (Kunda, 1992).

Adhocracies

The third category of integration mechanisms ensures that a diversity of perspectives will be taken into account when working on client projects (Galbraith, 1973). Frequently, PSFs utilize adhocracies to accomplish this goal.

A special form of integration mechanisms, adhocracies are often used in PSFs when the client's needs cut across departmental boundaries (Mintzberg, 1979). When PSFs employ adhocracies, specialists are grouped into functional units for housekeeping purposes -- e.g., hiring, professional communication, training - - but deployed to client-based project teams to do their work. Adhocracies are designed to manage the complexity and uniqueness of the many projects PSFs tackle by cutting across vertical and horizontal organizational lines. They are organized to be well-run temporary project teams, designed to serve the client's specific needs (Waterman, 1990). This means adhocracies frequently change their internal shape -- titles change from week to week, responsibilities shift, and professionals switch teams or transfer jobs (Toffler, 1970).

Because ad-hoc teams frequently change group composition, coordination is achieved by mutual adjustment (Thompson, 1967; Mintzberg, 1979). Under mutual adjustment, control of the task rests in the hands of the professional assigned to the job, and information is transmitted and knowledge develops as the work unfolds. Hence, the success of adhocracies depends primarily on the ability of specialists to adapt to each other and the project. The adhocracy not only relies on standardized skills of specialists to serve the client; it also treats existing knowledge and skills as the bases on which to build new ones.

Adhocracies are appropriate when the work is reciprocal or demands that different employees diagnose problems and collaborate together to solve them (Van de Ven and Delbecq, 1976). To illustrate the need for adhocracies in PSFs, consider the situation where a client of a law firm wants information on

international telecommunication regulation. For the PSF to provide this information, it needs the skills of both lawyers who have expertise in international law and lawyers who specialize in the regulation of utilities. Therefore, the law firm may form an adhocracy that brings together lawyers who specialize in both disciplines -- international law and the utility industry.

The Advantages of Integration Mechanisms in PSFs

A major advantage of integration mechanisms is that they facilitate innovation in PSFs (Mintzberg, 1979; Kanter, 1988). When PSFs are highly differentiated, new problems are solved with traditional solutions or forced into old pigeonholes. In certain situations, using traditional solutions to solve new problems is fine. For instance, an independent audit performed by a CPA firm must consistently apply the guidelines established by the American Institute of Certified Public Accountants (AICPA), or an attorney must file legal disposition following the guidelines set by her state bar. However, in many cases a PSF must not only employ traditional skills to serve the client, but it must also innovate by developing new services and skills or diversify into different markets (Howard, 1991; Bailey and Neilsen, 1992).

The ability of a PSF to innovate requires the introduction of new concepts or programs. This results when different specialists join forces in multi-disciplinary teams or share knowledge through job rotations, workshops, or electronic mail systems. Bailey and Neilsen (1992), in their research of social work agencies, discovered that often client needs are constantly changing, and these new needs requires collaboration among professional

specialties. Integration mechanisms helped in enhancing the innovation process because social workers responsible for traditional case loads collaborated with colleagues organizing one-of-a-kind efforts to gain new sources of funding. Furthermore, the information-sharing activities of the teams expedited the innovation process because specialists became aware of their divergent perspectives early in the project instead of each specialist's knowledge remaining tacit (Purser and Pasmore, 1992).

Adhocracies are not the only integration mechanism that increase innovation in PSFs. Frequent job rotation of professionals leads to changes in the information flow and the development of new perspectives, which in turn result in changes in the strategic opportunities pursued by a PSF (Peters, 1992). For instance, although partners in the public accounting industry are encouraged to become specialists, the partners who have job experiences in more than one function are often the source of new services, such as the development of the "total audit, which integrates the tax and management advisory services into the annual audit" (Montagna, 1974).

Brokerage firms often utilize a matrix organizational structure as an integration mechanism to encourage innovation (Eccles and Crane, 1988). The brokerage firm A.G. Edwards & Sons combines geographical and functional grouping as an integration mechanism (Zemke and Schaaf, 1989). This form of integration allows A.G. Edwards & Sons to stay in touch with the changing needs of their clients throughout the country, while at the same time regional managers are free to develop opportunities unique to their own markets and the needs of their clients. When clients complained that their account statements

were difficult to read and understand, the local brokers worked with the information system staff in corporate headquarters to study and reformat the statements and in the process invested in a retooling system to make the new forms work.

The client service innovation capabilities developed from integration mechanisms are key determinants of financial success since it is a strategy for PSFs to distinguish themselves from others (Bailey and Neilsen, 1992). This is because innovation allows PSFs to change current operation methods in order to render more valuable services to their clients, and innovative changes in operating methods can result in a cost savings which affects the PSF's profitability (Maister, 1990). Furthermore, as many professional service industries experience lack of growth markets of their traditional services, being innovative by creating new services, diversifying into new markets, or redesigning old services has become a necessary strategy to increase financial earnings (Howard, 1991). Consequently, a PSF at the frontier of innovation is likely to stay there, because by constantly developing new ideas, it has the capacity to develop other new services, and thus innovation capabilities become a continuously growing competitive edge (Quinn, 1992). There are also negative financial consequences when PSFs do not innovate, because the professional service marketplace is constantly changing; old services become obsolete and are replaced with new ones. Therefore, PSFs which do not innovate are threatened with the possibility of losing present clients, thus decreasing the PSF's financial earnings. Hence, it is argued that:

Hypothesis 5a: The use of integration and adhocracies as coordination mechanisms in PSFs will increase client service innovation, and the increase in client service innovation capability will positively affect the PSF's financial performance.¹⁹

External Networks in PSFs

Although integration mechanisms control for internal interdependence, the work of a PSF often demands coordination mechanisms that reach beyond the formal boundaries of a PSF (Mintzberg, 1979). Organizational members in PSFs maintain a complex set of external ties with competitors, customers, governmental agencies, regulatory agencies, and research institutions. This requires professionals to create networks external to the PSF (Eccles and Crane, 1987). External networks of a PSF behave as a coordination mechanism that allows professionals to efficiently establish relationships with external colleagues and stakeholders for the purposes of trading information (Kanter, 1988).

Since many PSFs act as intermediaries between their clients and other parties (e.g., a lawyer is an intermediary between her client and the court system), for professionals to effectively do their jobs there is a need to gather extensive information from external parties. However, for a particular client problem, the composition of the external network may differ significantly. In some instances, the professional may need to contact regulatory agencies to solve client problems, but other cases may require the professional to call on

¹⁹Although adhocracies are a type of integration mechanism that accomplishes many of the same goals as other types of integration mechanisms, researchers conceptualize it as a separate and distinct concept (Mintzberg, 1979; Waterman, 1990).

industry experts.

Moreover, because many partners in PSFs are salespersons looking for new business, it is essential for them to become liaisons with the PSF's external environment (Mintzberg, 1979). For instance, in the public accounting industry, revenues are often determined by a partner's ability to frequently spend time outside the firm, using his or her external networks to cultivate new clients or to substantially expand services to existing accounts (Stevens, 1981).

Furthermore, contacts with external colleagues who see the world differently is a prerequisite for developing client-related skills (Eccles and Crane, 1988). Studies show that professionals with a cosmopolitan orientation, that is, an allegiance to outside professional groups, are more productive and committed to developing skills than professionals who possess a local orientation, those who have allegiance to an inner organization (Gouldner, 1957; Rogers and Shoemaker, 1971). The external contacts with colleagues outside the PSF allow professionals to gather a diversity of knowledge about industry conditions or prospective clients, and the professional can bring this information back into the PSF.

If PSFs use the knowledge gathered from external networks to develop client service skills, these skills can improve the PSF's financial position (Maister, 1992). This is because many PSFs are not only in the business of selling their skills, but clients also expect them to bring together whatever people are necessary to resolve their problems, even if this necessitates calling upon outsiders to the PSF. Therefore, PSFs with easily accessible external

networks have advantages over their competitors because they can command a premium price for their services since clients are willing to pay more for the lawyer who can obtain expert witnesses or the architect who has access to builders (Eccles and Crane, 1987; Maister, 1992). Moreover, when PSFs can bring collective knowledge derived from external sources, it has early access to new information in its fields. This improves the PSF's service quality, increases its depth of expertise, and provides a greater understanding of the client's needs. These client service skills will have positive affects on the PSF's financial performance either by increasing revenues or lowering costs. Thus, it is proposed that:

Hypothesis 5b: PSFs employing external networks will have high levels of client service skills, and these client service skills will positively affects its financial performance.

Chapter Summary

Figure 4.1 illustrates how task complexity and task interdependence necessitate coordination mechanisms in PSFs. The use of these coordination mechanisms develops social complex organizational resources that enhance the PSF's ability to better serve clients, and the improvement in client service affects the PSF's financial position. differentiation manages task complexity through specialization. It groups together specialists with common professional training, and the resulting frequent contact among specialists develops the PSF's client service skills. In contrast to differentiation, integration and adhocracies (a special type of integration mechanism) encourage collaboration between groups in PSFs so that unity of effort may be achieved. Since both

of these coordination mechanisms bring together professionals from different disciplines, the PSF's ability to innovate improves. Lastly, Figure 4.1 depicts the use of external networks as an integrating coordination mechanism in PSF. These networks manage coordination with external stakeholders and help improve client service because professionals bring the knowledge, skills, and information gathered from their external contacts into the PSF.

CHAPTER V

RESEARCH DESIGN

First, this chapter develops a model that explains the linkage of control and coordination mechanisms to performance in PSFs. This model will be used to empirically test the hypotheses developed in Chapters III and IV. The next sections describe the context and the sample used for testing this model. After the sampling techniques are described, Chapter V explains the procedures employed for instrument development, pretest, and administration of the survey. Lastly, this chapter discusses the measures and response rates of the survey that was administered.

A Model of Control and Coordination Mechanisms in PSFs

Chapters III and IV examine how control and coordination mechanisms develop socially complex organizational resources in PSFs and hypothesize as to how certain types of control and coordination mechanisms "balance" three dimensions of performance in PSFs: human resource management, innovation, and financial earnings.

Based on the theoretical support presented in Chapters III and IV, Figure 5.1 presents a model of control and coordination mechanisms in PSFs that will be used to empirically test the hypotheses developed in this dissertation. The model encompasses both control and coordination mechanisms as key determinants of performance in PSFs. Control mechanisms align the goals of employees with the goals of PSFs by reinforcing employees' expectations through the development of organizational values and beliefs. Coordination

mechanisms link professionals together so that skills and knowledge can be pooled for better service to the client.

In summary, the model in Figure 3.2 depicts bureaucracies, clans, and intrapreneurship as control mechanisms that affect a PSF's financial earnings, and these relationships are mediated through the PSF's human resource management performance, client service skills, and client service innovation. Bureaucratic control mechanisms conflict with the attitudinal attributes of the professional, and therefore, have negative consequences to the PSF's performance. In contrast, clans and intrapreneurial control mechanisms have positive affects on the PSF's performance because through the alignment of the PSF's goals with the goals of its organizational members, these two types of control mechanisms create a work environment where employees maximize their efforts.

The coordination mechanisms in this model include differentiation, integration, adhocracies, and external networks. High levels of differentiation and the use of external networks assist PSFs in enhancing client service skills by the use of specialists and bringing in information gained from external sources, and this results in higher financial earnings. Adhocracies and other types of integration mechanisms facilitate client service innovation because they bring together different perspectives. This diversity of viewpoints creates new services, and these services ultimately lead to higher financial services since new services generate additional revenues.

In addition, the model depicts the relationship between the various aspects of performance in PSFs. Because human resources are the key asset

of a PSF, the model shows human resource management performance affecting client service and financial performance. It also contains direct paths from client service skills and client service innovation to financial performance. The rationale for these paths is based on the assumption that high client service performance will impact a PSF's financial earnings.

Context for Examining Empirical Model

The theoretical framework of this study and the hypotheses developed and modeled required me to select a professional service industry where: (1) the employees display high levels of the attitudinal attributes of professionals; and (2) firms confront the challenges of employing the appropriate control and coordination mechanisms to compete in the output market for its services and the input market for its productive resources -- human capital, or in other words a determinant of success in this industry is the PSF's ability to "balance" the demands of developing innovative, high quality client services and achieve high levels of financial performance, while at the same time effectively recruiting, utilizing, and retaining highly skilled professionals. For these reasons, I selected the public accounting industry because many of the employees exhibit the attitudinal attributes of professionals and surviving in this industry requires that firms compete in both the output and input markets (Montagna, 1974; Stevens, 1981; Arnett and Danos, 1979).

The Industry Structure of Public Accounting Industry

In the public accounting industry, the largest six accounting firms (better known as The Big Six) earn 33 percent of the industry's \$35 billion revenue

(United States Department of Commerce, 1992). Their corporate clients generate 94 percent of all sales profit and pay 90 percent of all income taxes in the United States (Stevens, 1981; 1991). These six firms which include Arthur Andersen, Coopers & Lybrand, Deloitte & Touche, Ernst & Young, KPMG Peat Marwick, and Price Waterhouse together employ approximately 150,000 people in 2,500 offices in more than a hundred nations. In addition to the Big Six, the other group of large firms in this industry are known as the Second Tier.²⁰ The larger of the Second Tier public accounting firms have offices throughout the United States and employ as many as 1,880 professionals, while the smaller Second Tier firms have only regional presence. The remainder of the firms in the public accounting industry are small local firms employing fewer than 10 professionals or sole proprietorships which account for 35% of ownership (United States Department of Commerce, 1992)

The Professions Represented in Public Accounting Firms

The majority of employees in public accounting firms are CPAs or are training to become CPAs, and their attitudinal attributes are similar to the description of professionals offered by Hall (1968) and Kerr et al. (1977).²¹ Before entering the public accountant profession, one is exposed to extensive training in audit, accounting theory and practices, ethics, tax accounting, and

²⁰For additional information on the top 100 public accounting firms refer to this list in Appendix A.

²¹Hall (1968) and Kerr et al. (1977) describe a professional as one who: (1) gains expertise from specialized training, (2) appreciates autonomous work, (3) feels a sense of commitment and identification with one profession, and (4) is obligated to render ethical services. For a more detailed description of professionals, refer to Chapter II.

business law. Professional certification in public accounting can only be acquired after passing a formal written test on the technical knowledge of the profession and working as a public accountant for two years. After training and certification, the CPA's work involves using her expertise to render objective, independent opinions on the financial statements of businesses or tax planning and preparation (Stevens, 1981; Armstrong and Vincent, 1988).

The past training and certification requirement provides the CPA with the belief that she is capable of working autonomously and with a strong sense of commitment to and identification with her profession (Montagna, 1974). Membership in the American Institute of Certified Public Accountants (AICPA), a professional association, is required to retain certification, and this reinforces the CPA's commitment to her profession. Moreover, the AICPA establishes the *Code of Professional Ethics* which serves as a set of strict guidelines for the CPA's work behavior.

The remainder of professional employees in public accounting firms who are not CPAs work as consultants.²² In contrast to traditional audit or tax work, the work of a consultant is not governed by rigid rules and procedures, but instead entails drawing upon skills, imagination, and innovation to size up client problems, design solutions, and see them implemented. Although there is no certification requirement, consultants exhibit some of the attitudinal attributes of professionals (Stevens, 1981). They are trained in specialized

²²The percentage of consultants working in a public accounting firm varies and ranges from none to forty percent (Stevens, 1991). However, it should be noted that some consultants are also CPAs.

bodies of knowledge such as psychology, actuary science, or computer science, which are employed to help resolve clients' problems. Consultants value their autonomy and believe that tight managerial controls inhibit the creativity needed for their work. Similar to other professionals, consultants can remain independent and objective in their work because they have not played a role in creating a company's products, structures, or operations.

Both CPAs and consultants progress through a structured career path before becoming partners in a public accounting firm (Jiambalvo and Pratt, 1988). There are four major positions in this career path. Staff assistants are individuals with less than three years of experience. Senior accountants or consultants have three to six years of experience. These individuals are responsible for the daily tasks of engagements and supervise the work of staff assistants. At the next level, managers have six to twelve years of experience. They work on several audit, tax, or consulting engagements simultaneously and review the work of staff assistants and seniors. The most talented managers are invited to become partners by contributing an amount to working capital between 25 to 50 percent of the individual's annual earnings (Stevens, 1981). Partners have the ultimate responsibility for the conduct of audit, tax, and consulting engagements and for reviewing the work of managers. The levels of a public accounting firm can be depicted as a pyramid with staff assistants and seniors supporting a smaller number of managers and relatively few partners. The typical mix is approximately 60% seniors and staff accountants, 25% managers, and 15% partners (Maister, 1981).

"Strategic Balancing" in Public Accounting Firms

Similar to many other professional service industries, public accounting firms confront the challenges of strategically "balancing" the demands and constraints imposed by competing in both the output market for its services and the input market for its human resources (Maister, 1988).

Competing in the Output Market. Up until the 1970s, the public accounting industry confronted a relatively stable, non-competitive environment (Bernstein, 1978). The passage of the Securities and Exchange Act of 1934 which required that all financial statements of publicly held companies be audited annually by CPAs, and the growth of industrial companies requiring regular internal and external audits, contributed to the stable, non-competitive environments of public accounting firms.

However, transition in the public accounting industry began when changes in regulation permitted advertising and continued with a wave of mergers in the 1980s. The environment that accounting firms compete in is now fundamentally changed (Wootton, Tonge, and Wolk, 1990). Expansion of client companies, both domestically and internationally, requires accounting firms to operate in multiple locations, but, at the same time, corporate mergers and LBOs have reduced the number of audit clients. Also, audit clients of the 1990s demand a wide range of services, want professionals with industry-specific knowledge, and are more willing to shop around for the best prices and to change accountants or consultants. Furthermore, public accounting is a maturing industry. Slow growth, intense price competition, lower profit

margins, a lack of product differentiation in the audit market, and the shakeout of marginal competitors evidence the maturing of the public accounting industry (Palmer, 1989).

Hence, these changes in the public accounting industry have required firms to compete aggressively in the output market for services. For instance, some of the larger public accounting firms are hiring advertising firms, establishing practice niches, and joining multinational networks as a way to differentiate their services (Stevens, 1991). Others are diversifying more into consulting, since this is where market growth is expected for the 1990s (Gordon, et al., 1985). In addition, fee cutting has become a practice in public accounting firms. Gone are the days when the giant audit firms could get anything close to their standard hourly rates for staff or partners services, and the desperation of some firms to gain clients is indicated by their charging rates as low as 50 cents on the dollar (Stevens, 1991). Smaller public accounting firms are competing by developing innovative, specialized services in particular industries, such as BDO Seidman which specializes in the financial service industry. Other strategies are to target small businesses, tax clients, and individuals needing personal accountants or financial planning.

Competing in the Input Market. Public accounting firms not only confront the challenge of competing for clients, but the market for hiring professionals has also become a competitive environment. Maister (1988) contends that this competitive environment has resulted from the fallout of the "baby bust." Demographics dictate that there will be a reduction of 30% in the

recruitable age group of professionals over the next ten years in many developed countries -- at a time when the demand for entry-level accountants and consultants is expected to increase rapidly. Therefore, to recruit the best talent, the salary costs for staff will rise by at least 50% in real terms within the next five years. In addition to demographic changes, "many of the brightest young people are shunning the accounting profession because they feel their talents can be put to better use in other fields" (Palmer, 1989: 88). This implies that competing in the input market will require accounting firms to create more opportunities for young professionals that will satisfy their growth and self-actualization needs, such as professional development programs to enhance their business knowledge and skills (Kelley, 1985).

Furthermore, the tactics of competing in the recruiting market have changed. In the past, public accounting firms only needed to recruit at universities with the best accounting programs. However, the growth of consulting and the demand for a broader range of services makes it necessary for firms to draw representatives from other disciplines into their ranks. Because of this, public accounting firms now compete with many different organizations for their human capital, including other types of PSFs, large corporations, and universities (Stevens, 1981; 1991).

In the public accounting industry, managing competition in the output market not only involves recruiting professionals, but also entails investing in retaining the best talent (Sheridan, 1992). After many accountants gain the two years of experience needed for certification, they leave public accounting

for other job opportunities or for graduate school.²³ If not managed, this turnover "can cost a CPA firm thousands of dollars each year -- and its competitive edge" (Peters and Kegel, 1988: 24). The major costs of employee turnover are investments in training and development, compensation, and expenses of replacing experienced professionals. Although some turnover is expected, public accounting firms do not want uncontrolled turnover with their best people leaving while other people stay.

Most turnover occurs among professionals (but not partners) who have worked with the firm for more than three years (Fusaro, Gaida and Zimmerman, 1984). The loss of personnel at this level is undesirable for firms since: (1) the number of valuable field personnel who generally carry out the burden of audit, consulting, and tax engagements is reduced; (2) professionals at this level are scarce in the marketplace and thus difficult and expensive to replace; and (3) firms lose talented, experienced professionals possessing partnership potential.

To retain valued professionals, some public accounting firms employ a variety of tactics, including a chance to join the management team, expanding their responsibilities, and providing more continuing professional education (Peters and Kegel, 1988). Other firms market their strengths to retain CPAs or consultants, such as providing work with clients in exciting growth industries, offering out of town travel to interesting places, or giving assignments that offer excellent learning experiences (Fusaro et al., 1984).

²³In public accounting, the turnover ratio for non-partners can be as high as 50%.

The Sample

The sample was drawn from local offices of public accounting firms in the United States. Local offices were chosen because they have a high degree of discretion over control and coordination mechanisms employed (Greenwood et al., 1990). Clients prefer public accounting firms located close to their business premises, and the search for new clients makes it advantageous for professionals to be integrated and active in the local community. Hence, geographical dispersion characterizes many public accounting firms, and each office is virtually a self-standing business responsible for its own marketing, management, and production activities.²⁴

The sample consists of two overlapping populations. The first segment of the sample contains public accounting firms listed as the top 100 in the industry by a 1993 *Public Accounting Report*. A detailed description of this sample is contained in Appendix A and includes information such as net revenues, number of employees, percentage of revenue from audit, consulting, or tax, and number of local offices. The characteristics of this sample are diverse. For instance, U.S. net revenues range from \$7.5 million to 2.6 billion, and the sources of this revenue varies. Some firms earn as much as 45% from consulting, but other firms earn a much greater proportion of their revenue in audit. One of the larger firms has as many as 135 local offices, where as many of the smaller firms only have one office.

²⁴However, many local offices are required to manage their financial accounts according to systems established in the national office, and there is usually a strong national focus on creating and maintaining professional standards (Greenwood *et al.*, 1990).

The second segment was drawn from public accounting firms with professionals who are Association of Accounting Administrators members. Because this professional association ensures their members anonymity, this organization would not provide me with detailed information about the firms in which their members work. However, I was informed that their membership represents over 300 local offices of public accounting firms throughout the United States, and many of these are listed as *Public Accounting Report's* Top 100, but other members work for firms with as few as five employees.

In the fall of 1993, I sent letters to all of the public accounting firms listed in the top 100 for 1993 asking for their participation in the study. For firms with many local offices (i.e., The Big Six and Second Tier firms), I only requested that local offices in the following cities participate in the study: Atlanta, Boston, Chicago, Cleveland, Dallas, Denver, Detroit, Houston, Los Angeles, New York, Philadelphia, San Francisco, Seattle, and Washington D.C. These cities were selected because they have high demand for professional services and represent a balanced geographical distribution across the country (Buller, Beck-Dudley, and McEvoy, 1989). Also, during the Fall of 1993, I prepared a letter to members of the Association of Accounting Administrators asking for their local office to participate in the study. Because of the importance of member anonymity, these letters were mailed directly by the Association of Accounting Administrators.

If firms indicated an interest in participating in the study, I asked them to return an information sheet to me in a self-addressed stamped envelope. The information sheet provided information that I needed to mail the surveys:

the firm's address, telephone number, a contact person who would distribute the survey, and a list of potential respondents.

For firms that did not respond to my initial request, I contacted the Director of Human Resources or Firm Administrator by telephone or mailed a follow-up postcard asking for their participation in the study. By January of 1994, 190 local offices of public accounting firms had agreed to participate in the study, and these are the offices that were sent surveys. This sample represents 33 different states and consists of 23.7% Big Six Firms, 23.7% Second Tier or large regional firms (more than 69 employees per office), 29.5% medium-sized firms (20-69 employees per office), and 23.2% small-sized firms (fewer than 20 employees per office).²⁵ Appendix B contains samples of correspondence used to solicit participation in the study.

Instrument Development and Pretest

The pretest survey instrument was developed using established measures in the corporate strategy, organizational theory, and sociology literature. These measures were adapted to be suitable for organizational members of professional service firms, and more specifically, for public accounting firms. The measures in the pretest instrument correspond with the hypotheses developed in this study and ask questions about control and coordination mechanisms, and the three dimensions of PSF performance -- human resource management, client service, and financial earnings. This chapter discusses

²⁵The parameters for classifying firm size were adopted from categorization used by the American Institute of Certified Public Accounts (AICPA). The AICPA membership consists of 23.4% sole practitioners. Of the firms with AICPA membership that are non-sole practitioners: 44.9% are small-firms; 22.4% are medium-sized; and 32.7% are large or Big Six firms.

each measure in detail, later.

The pretest instrument was designed employing the Dillman's (1978) Total Design Method. This approach gives detailed directions on the formatting of the survey, wording of the cover letter, and follow-up mailings. The goals of the pretest were to determine:

1. If each question measured what was intended to be measured.
2. If all of the words were understood and questions were interpreted similarly by respondents.
3. If each close-ended question had an answer that applied to each respondent.
4. If the questionnaire created a positive impression that motivated respondents to participate in the study.
5. If the question would be answered correctly (i.e., were some missed or elicited uninterpretable answers).
6. If the questionnaire suggested bias on the part of the researcher.

To accomplish these goals, the pretest instrument was distributed to three groups of people. The first group consisted of professors and colleagues in the doctoral program at the University of Michigan Business School. This group of pretest respondents evaluated the questionnaire in terms of whether it would accomplish the study's objectives. The second pretest group consisted of two industry experts. One is a manager in a national office of a Big Six accounting firm who is responsible for strategic human resource planning for all local offices of his firm. The second industry expert is a firm administrator who is in charge of managing the finances, personnel, and operations for a regional public accounting firm; and holds an executive position

in the Association of Accounting Administrators. My primary interest in this group was to obtain information from people with substantive "real world" knowledge of the survey topic.

The third group of pretest respondents included people who work for or have worked in public accounting firms. This sample consisted of: (1) MBA students in the University of Michigan Business School, who had worked at a public accounting firm before enrolling in the MBA program; (2) managers and partners of a local office of a Big Six firm in upstate New York; and (3) partners and managers of a medium-sized firm in Chicago. People in this group were chosen to represent a cross-section of potential respondents. They were mailed a cover letter describing the goals of the pretest and given a survey to complete. After completing the survey, respondents were asked to fill out a feedback sheet that asked questions about how long it took them to complete the questionnaire and the appropriateness of questions. This group yielded 24 completed pretest instruments.

The pretest results indicated that, on average, it took respondents from the third group 30 minutes to complete the survey. Most respondents had no problem understanding survey questions and found the survey interesting. The questions that pretest respondents reported as difficult to understand were modified to increase clarity. The pretest group of professors and colleagues expressed concerns regarding the reliability and substance of the measures for control mechanisms, differentiation, and client service innovation; these measures were changed to address their concerns. The industry experts provided me with positive feedback and made no suggestions regarding

changing the pretest instrument.

Appendix C contains a copy of the pretest instrument along with sample correspondence and the feedback form that accompanied the pretest instrument.

Survey Administration Procedures

Similar to the pretest instrument, the final survey was designed and implemented following Dillman's (1978) Total Design Method. In February and March of 1994, questionnaires were mailed to the 190 local offices of public accounting firms that agreed to participate in the study. A package containing a cover letter, certificate of appreciation, and nine surveys in sealed envelopes was mailed to the contact person (Director of Human Resources or Firm Administrator) in each local office. In this package was a letter that informed the contact person about the study and explained that nine key respondents should receive the survey: (1) the managing partner, (2) an audit partner, (3) a consulting partner, (4) a tax partner, (5) an audit manager, (6) a consulting manager, (7) a tax manager, (8) the Director of Human Resources, and (9) the Director of Marketing.²⁶ Directors, partners, and managers were chosen because their tenure and responsibility gives them more knowledge than seniors or staff assistants about the firm's control and coordination mechanisms and its performance (Greenwood et al., 1990). Each sealed envelope that was

²⁶This approach to data collection is similar to the key informant technique described by Seidler (1974). Informants are chosen on a basis of particular qualifications (e.g., specialized knowledge or position in an organization). Instead of reporting on their own personal feelings or opinions, key informants provide information on the organization's behavior.

given to a key respondent contained a cover letter, a questionnaire booklet, and a stamped, self-addressed envelope that the respondent used to return the questionnaire to me.

One month after the initial mailing, follow-up post cards were sent to all contact persons who distributed the questionnaires. The follow-up postcard thanked the contact person if his or her firm members had already completed and returned the surveys. If not, the follow-up postcard emphasized the importance of completing and returning the questionnaires. In addition, the follow-up post card asked the contact person to telephone me if the package was not received, and I would mail another package. If I had not received any questionnaires from a local office by April of 1994, I telephoned the contact person requesting his or her participation in the study.

Survey expenses were funded through the researcher's personal finances and research grants from the Society for Human Resource Management, the Ph.D. Program of the University of Michigan Business School, and the Paton Accounting Center at the University of Michigan Business School.

A copy of the final questionnaire and the correspondence that accompanied it when mailed are contained in Appendix D. Appendix D also contains samples of the follow-up mailing.

Response Rate

A total of 1,645 questionnaires were mailed to 190 local offices of public accounting firms. In total, 515 completed surveys were received from 112 local offices of public accounting firms. Their individual data was aggregated

to form measures at the office level. The individual level response rate is 31.3%. Table 5.1 reports the functional and hierarchical distribution of these respondents. Professionals whose primary task is administration (e.g., managing partner, human resources, marketing) or audit constitute the largest functional groups in the data base at 27.3% and 26.5%, respectively. This is probably because administrative personnel were contact persons for this study and audit is the major functional area of most public accounting firms.

In comparison to the individual-level response rate, the local-office level response rate is substantially higher at 58.9%. This response rate represents the percentage of local offices from which I received at least one questionnaire. The number of respondents in local offices ranged from 1 to 9, with an average of 2.71. Table 5.2 summarizes the distribution for number of respondents from each local office of a public accounting firm.

Table 5.3 compares the distribution of the initial sample and the local offices that responded by size. This table indicates that the offices were distributed across different size categories, ranging from fewer than 20 employees to local offices of Big Six firms that have more than 100 employees. Respondents' size breakdown for local offices was: Big Six firms (25%), large non-Big Six firms (17.9%), medium-sized firms (35.7%), and small firms (21.4%). Non-response bias was analyzed with regard to office size. Overall, response rates were quite similar across categories, although medium-sized firms were slightly more likely to respond than large, non-Big Six firms.²⁷

²⁷Results from the Chi-square test support this statement. The Chi-square test was significant ($p < 0.04$).

Measures

Where possible, already validated and reliable scales from the literature were used for measures. When I was not able to identify validated scales in the literature, I developed my own measures which reflected the theoretical framework presented in Chapters III and IV and the model developed in this chapter. The specific measures are described below, and Tables 5.4, 5.5, and 5.6 summarize the measures used in this study and list their corresponding hypotheses.

Bureaucratic Control Mechanisms

To measure bureaucratic control mechanisms, I used a six-point Likert scale. These measures are based on Cooke and Rousseau's (1988) research of behavioral norms and expectations in organizations. Their measures were designed to capture the shared beliefs and values that govern the thinking and behavioral styles of organizational members. The measures of bureaucratic control mechanisms describe organizations where members are hierarchically controlled. The behavior of organization members is non-participative and governed by the authority inherent in one's position. Thus, in these organizations, it is important for managers to take charge and control their subordinates' behavior, and control mechanisms reward members for conformity and following rules established by superiors. The average Cronbach's alpha for these measures in Cooke and Rousseau's research is 0.81.²⁸

²⁸Cronbach's alpha is a reliability coefficient used for questionnaire scales.

To adapt Cooke and Rousseau's measures for organizational members in PSFs, I integrated their measures with Hall's measures (1968). Hall used these measures to ascertain if there is an inverse relationship between professionalization and bureaucratization. His measures, based on Weber's description of bureaucracy, include: hierarchy of authority, division of labor, presence of rules, procedural specification, and impersonality of organizational members.

Clan Control Mechanisms

The measures for clan control mechanisms were also adapted from Cooke and Rousseau's (1988) research on behavioral norms in organizations. Their initial study draws from Ouchi's (1981) research on control mechanisms and are similar to measures used by Ouchi and Johnson (1978) to test the relationship between organizational control mechanisms and emotional well-being in organizations. Ouchi and Johnson's (1978) measures of clan control mechanisms are a set of indices that measure the organizations' holistic concern for its employees, the usage of non-bureaucratic control mechanisms (e.g., self-motivation, peer pressure, sharing values with superiors, and lack of bureaucratic pressure to follow rules), and the importance of maintaining control through shared values, consensus decision-making, goal congruency, and high levels of employee involvement. The reliability of Ouchi and Johnson's (1978) indices range from 0.53 to 0.71, and for Cooke and Rousseau's measures (1988), the Cronbach's alpha ranges from 0.81 to 0.92.

Intrapreneurial Control Mechanisms

The constructs used to measure intrapreneurial control mechanisms represent the professional's freedom to act as an entrepreneur within her firm. These measures examined the extent to which the local office emphasized intrapreneurship and were modified from Zahra's (1991) research that models the relationship between environmental, strategic, and organizational factors that spur or stifle intrapreneurship and the association between intrapreneurship and corporate financial performance.

A scale consisting of seven items was used to gauge intrapreneurial control mechanisms. Responses were based on a six-point scale (1 = "no emphasis at all" to 6 = "very extensive emphasis"). The items represent the extent to which the public accounting firm trains professionals in new business development, rewards creativity, makes resources available for experimental projects, and solicits employees' ideas for new products and processes. Zahra (1991) obtained a Cronbach's alpha of 0.86 for these measures.

Differentiation -- Coordination Mechanisms

The differentiation measures assess the differences in the structure, interpersonal relationships, and goal orientation of the three major sub-units in public accounting firms -- audit, consulting, and tax. These measures were borrowed from Lawrence and Lorsch's (1967) and Zanzi's (1987) conceptualizations of differentiation. Zanzi tested his measures in public accounting firms, and his scale resulted in a Cronbach's alpha of 0.80.

The measures of differentiation were developed to determine how

respondents perceive both differences in the orientation of their own department and others. These measures were designed to assess if each subunit develops attributes and skills to manage the specific demands and process information from their relevant sub-environment and external stakeholders (e.g., clients, regulatory agencies, competitors).

Integration and Adhocracies -- Coordination Mechanisms

Integration was measured to ascertain the extent to which professionals in the local offices of public accounting firms collaborate with other departments and local offices within their firms to achieve organizational goals and meet the demands of their environments (Lawrence and Lorsch, 1967). In addition, these measures examined how information and skills are shared within the organization. Two dimensions represented the integration measure: (1) joint activities between departments (e.g., training, planning, job rotation conflict resolution, etc.); and (2) opportunities for organizational members to come together to share information (e.g., educational seminars, briefing sessions, informal meetings).

No measures were available to assess adhocracies in PSFs. Therefore, non-validated questionnaire items for adhocracies were used. These items are based on Mintzberg's (1979) and Waterman's (1992) description of adhocracies and were written to be appropriate for respondents in PSFs. The items inquired about whether the local office of the public accounting firms brings professionals together in teams from different functional areas and different hierarchical levels to share their expertise for client engagements.

External Networks -- Coordination Mechanism

As was the case for adhocracies, no valid measures exist for external networks in the literature. The survey items measuring external networks were developed from Eccles and Crane's (1988) research on external networks in investment banks. The measures used for this dissertation look at the frequency that professionals have contact with external stakeholders (e.g., clients, industry associations, regulatory agencies, etc.). This measurement of external networks is consistent with conceptualization of networks in the organizational theory and sociology literature (Tichy, 1981). The specific external network measures listed in the questionnaire are based on Stevens' (1981: 26) listing of the important affiliations that partners and managers of public accounting firms maintain, external to the firm, for the purpose of "spreading the firm's influence and drumming up new business." These external stakeholders include members of trade associations, employees of governmental agencies, accounting or consulting professionals who do work in the respondent's firm, clients, and university faculty.

Performance

The performance items on the questionnaire were developed to measure the PSF's ability to "balance" the demands of the client marketplace, its human resource management needs, and its financial earning goals (Maister, 1982). These measures were adopted from Maister's (1992) research on PSFs. Additional performance measures were obtained from a director in a Big Six accounting firm who provided me with a list of performance measures used in

the public accounting industry.

It should be noted that items developed for measuring the three dimensions of PSF performance are subjective measures based on respondents' perceptions of their local office's performance. The rationale for using perceived performance measures is that public accounting firms are private partnerships that are not required to report performance information to outside parties. Thus, objective performance measures are not made available to the public or are severely restricted. Interviews prior to the development of the questionnaire with industry experts and partners of public accounting firms indicated that most firms would release any objective performance-related data. Furthermore, research indicates that subjective performance measures obtained from senior managers correlate strongly with objective measures and, in the absence of objective measures, are appropriate (but not preferable) substitutes (Dess and Robinson, 1984).

Respondents were asked to consider the current stage of their office and its competitive markets and assess performance in the following areas: financial, human resource management, and client service. Client service performance was measured as a two-dimensional construct that represented client service skills and client service innovation. Comparisons were made for financial performance, human resource management performance, and client service skills on a 7-point Likert scale with each item ranging from 1 (low performer) to 7 (high performer). Financial performance measures consisted of two items that asked respondents' perceptions of its office's sales growth performance and profit performance. The human resource management

performance measure assessed the local office's ability to recruit and retain the best talent, employee satisfaction, quality of human resources, and human resource development skills. The client service skill items measured the local office's depth of expertise in serving the client and the quality of its services. The second dimension of client service, innovation, was measured with seven items on a 6-point scale. These items examined the extent to which the local office emphasized the pursuit of new clients and new business development (Bantel and Jackson, 1991; Zahara, 1991).

Chapter Summary

This chapter described the research design for the study. Here the context of the study and the sample were discussed, procedures for data collection were presented, and the measures developed for the study were provided. In Chapter VI, data analyses and results of these analyses are presented and discussed.

CHAPTER VI

DATA ANALYSIS AND RESULTS

Chapter VI describes the data analysis techniques used to test the hypotheses and the model developed in previous chapters. In addition, this chapter presents and discusses the results of the data analysis.

Data Analysis -- Phase I

Data analysis was performed in two phases. The first phase used *SPSS/PC+ Version 5.0* to analyze the data. This phase of data analysis consisted of: (1) performing exploratory factor analysis for each set of measures representing a construct; (2) calculating descriptive statistics for each construct; (3) examining the correlations between constructs; and (4) performing tests of reliability for each construct. The results from phase one of the data analysis were used as inputs for the path analysis performed in the second phase of data analysis.

Exploratory Factor Analysis

Three separate exploratory factor analyses were done for each group of constructs: control mechanisms, coordination mechanisms, and performance. Each group of constructs was factor analyzed with a principal component analysis and the oblique rotation. Norusis (1992: 59) describes principal component analysis as:

A method of factor extraction where linear combinations of the observed variables are formed. The first principal component is the combination that accounts for the largest number of variance in the sample. The second principal component accounts for the next largest amount of

variance and is uncorrelated with the first. Successive components explain progressively smaller portions of the total sample variance, and all are uncorrelated with each other.

An oblique rotation does not arbitrarily impose the restriction that factors be uncorrelated, such as a varimax rotation (Kim and Mueller, 1978). Instead, this method of factor rotation assumes constructs are correlated and will yield substantively meaningful factors when this is an assumption of the researcher. For each exploratory factor analysis discussed in this chapter, an item was retained if it had a primary factor loading of over 0.40 and no cross-loadings higher than 0.35 (Kim and Mueller, 1978).

From a scree test, three interpretable factors with eigenvalues greater than 1.0 emerged for factor analysis of control mechanisms: (1) clan control mechanisms, (2) bureaucratic control mechanisms, and (3) intrapreneurial control mechanisms. The three factors combined explain 59.1% of the variance in the data. Table 6.1 presents the factor loadings for the control mechanism items.

In the second factor analysis, four factors emerged with eigenvalues greater than one and ranging from 5.7 to 1.4. The four factors represent the coordination mechanism discussed in Chapter IV and include: (1) differentiation, (2) integration, (3) adhocracies, and (4) external networks. These four factors explain 57.6% of the variance. The differentiation factor explains the majority of the variance at 25% and the external network factor explains the least of the variance at 6.4%. Table 6.2 summarizes the factor loadings information for the coordination mechanism items.

The last factor analysis was performed with twenty items from the

questionnaire and assessed the four dimensions of PSF performance. This factor analysis resulted in four factors that describe: (1) client service skills, (2) client service innovation, (3) human resource management performance, and (4) financial performance. The eigenvalues for these factors range from 6.6 to 1.3, and the four factors combined explain 64.2% of the variance in the data. Table 6.3 provides the factor loadings for each performance construct, its eigenvalues, and percentage of variance explained by the third factor analysis.

Reliability Test and Correlation Analysis

After the completion of factor analysis, composite constructs were formed from each of the 11 factors (3 factors representing control mechanism, 4 factors representing coordination mechanisms, and 4 factors representing performance measures). Composite constructs were formed by averaging the items that loaded on a factor. Table 6.4 presents the descriptive statistics for each of the constructs.

To test the reliability of each of the 11 constructs, the Cronbach's alpha was calculated using the *SPSS/PC+ Professional Statistics* package. This reliability test is designed to measure the extent in which items of a construct consistently yield the same results on repeated trials (Carmines and Zeller, 1979). Cronbach's alpha is based on the average correlation of items in a scale (Nouriss, 1992). For this study, the Cronbach alpha's for the construct ranged from .63 (financial performance) to .91 (differentiation). Thus, the results of the reliability tests indicate appropriate scaling and internal consistency of the measures (Long, 1983). Table 6.4 provides the Cronbach's alpha for each

construct.

Table 6.5 provides the correlations between the 11 constructs. It also indicates which intercorrelations are significant at the 0.01 and 0.001 levels. Many of the intercorrelations are statistically significant in the expected direction. For instance, the intercorrelation between the construct measuring bureaucratic control mechanisms and human resource management performance is -0.40 and significant at the 0.001 level.

Data Analysis -- Phase II

The next step of data analysis entailed analyzing the model specified in Figure 5.1. This model was examined by structural equation modeling using LISREL 8: The Simplis Command Language (Joreskog and Sorbom, 1993). This methodology was selected because: (1) it allows for simultaneous estimation of a structural model that relates variables to one another by providing path coefficients for effects; and (2) its ability to combine path analysis with factor analysis and multiple regression analysis.

The process of path analysis performed by LISREL entails:

Estimating the coefficients of a set of linear *structural equations*, representing the cause and effect relationships hypothesized by the investigator. The system involves variables of two kinds: independent or cause variables (e.g., $x_1, x_2 \dots x_q$) and dependent or effect variables (e.g., $y_1, y_2 \dots y_p$). The classical technique consists of first solving the structural equations for the dependent variables in terms of the independent variables and the random disturbance terms to obtain the reduced form equations, estimating the regression of the dependent variables on the independent variables and then solving for the structural parameters in terms of the regression coefficients (Joreskog and Sorbom, 1993: 11).

The Partial Disaggregation Model

The eleven latent constructs developed from the factor analyses in the first phase of data analysis were used as the basis for the path analysis input. Typically in LISREL models, scale items are disaggregated so that each component is modeled as a distinct latent variable, and each item from a scale is used as an indicator of its corresponding factor (Bagozzi and Edwards, 1994). This is known as the total disaggregation model. The primary advantage of the total disaggregation model is that its estimates of factor loading indicate the degree of correspondence between each item and its respective factor. In addition, the factor loadings and error variances for items can be used to compute composite measures of reliability, similar to Cronbach's Alpha. However, the disadvantages of the total disaggregation model include that factors can display greater amounts of random error and sometimes correlations of items within and across factors will exhibit large discrepancies (Bagozzi and Edwards, 1994). As a result, the likelihood of achieving a poorly fitting model is greater, indicated by inflated chi-square values. In addition, because the total disaggregation model increases the number of parameters to be estimated, this requires a large sample size (researchers recommend at least three to five cases per parameter (Bentler and Chou, 1987)). Therefore, given the sample size limitation of this study, data was analyzed using the partial disaggregation method.

The partial disaggregation model is structurally similar to the total disaggregation model, but each construct (e.g., bureaucracies, clans,

adhocracies, etc.) is represented as a separate latent variable indicated by composites of sub-scales (Bagozzi and Heatherton, 1994). The advantage of the partial disaggregation method is that it tends to decrease measurement error, while at the same time it reduces the number of parameters to be estimated. Hence, in comparison to the total disaggregation model, the partial disaggregation model permits smaller sample sizes, and model fits are generally better. This is because there is less of a likelihood that discrepancies will be found between the observed and implied covariance in the computation of the chi-square indices (Bagozzi and Edwards, 1994). In addition, the partial disaggregation model allows the researcher to examine the distinctness of components, and it permits the computation of reliability measures for components and their indicators.

For this study, the partial disaggregated model was operationalized using the guidelines recommended by Bagozzi and Heatherton (1994) which suggest when the number of items per dimension is relatively small (such as five to nine items) it is appropriate to form two composites for each dimension. Two composites were formed for each of the eleven constructs, and each composite is an average of items. For instance, the construct representing intrapreneurial control mechanisms was developed from a six-item scale (Refer to Table 5.4 for a listing of the items representing each construct). This six-item scale was used to form two composites (intrapreneurship1 and intrapreneurship2) that represent intrapreneurial control mechanisms, with the average of three items on each composite. Figure 6.1 illustrates the model specified in this study using the partial disaggregation method. It depicts the two aggregate

indicators for each of the eleven latent constructs.

Table 6.6 presents the correlation matrix that was used as input to LISREL 8. It contains two composites for each of the eleven constructs. In all but one case, the intercorrelations among composites representing the same construct are higher than the correlations of composites representing different constructs. This provides support for the convergent and discriminant validity of the constructs used in this study.²⁹

However, in the one instance where this is not true is the correlations between the integration composites and the network2 composite. The composite network2 has higher correlations with integration1 and integration2 (0.47 and 0.41, respectively) than with the network1 composite (0.38). Moreover, the lack of discriminant validity between network2 and the integration composites are evident in the intercorrelation between the latent network construct and the latent integration construct (Refer to Table 6.7). This correlation of 0.88 is within two standard errors of 1.00, which suggests lack of discriminant validity.³⁰ This lack of discriminant validity will be further addressed in the Discussion Section of Chapter VII.

Assessment of Overall Model Fit

Table 6.9 presents the structural parameter estimates for the hypothesized model. Figure 6.2 presents the model to test the hypotheses and

²⁹Convergent validity is the degree to which multiple attempts to measure the same concept are in agreement, and discriminant validity is the degree to which measures of different concepts are distinct (Campbell and Fiske, 1959).

³⁰Bagozzi and Heatherton (1994) contend that a lack of discrimination between latent constructs occurs when the intercorrelations are within two standard errors of 1.00.

indicates which paths are significant.

Preliminary Evaluation of Model

Bagozzi and Yi (1988) suggest determining if any anomalies exist in the output as a first step in the evaluation of structural equation models. The most common anomalies in the LISREL output are negative error variances for the observed and latent variables; correlations greater than one; and extremely large parameter estimates. When these findings exist, it points to model specification errors, identification problems, or input errors. The LISREL 8 output of this study does not indicate any of these anomalies.

Global Measures of Fit.

The fit statistics for the overall path model reveal a somewhat adequate fit of the data. The chi-square goodness of fit statistics yielded a value of 274.43 with 175 degrees of freedom ($p = 0.00$). This statistic of overall model fit measures the differences between the sample correlation matrix and the fitted correlation matrix and is considered a good fit when the chi-square is small and the p value is greater than or equal to 0.05 (Joreskog and Sorbom, 1993). Therefore, by the usual rule-of-thumb, one would reject this study's model.

However, the chi-square test is particularly sensitive to sample sizes (Bagozzi, Yi, and Phillips, 1991). The likelihood of rejecting a model as the sample size increases is great because the larger sample size makes it easier to detect discrepancies between the implied and observed correlation matrices, and with small sample sizes, large deviations of a hypothesized model from a

true model may go undetected (Bagozzi, 1993). Another weakness of the chi-square test is that it does not directly provide indices normalized from 0 to 1 that indicate a degree of fit.

In contrast to the chi-square statistic, the adjusted goodness of fit index (AGFI) is independent of sample size and provides a more direct measure of how well a model fits data.³¹ The AGFI usually falls between zero and 1, where zero indicates a complete lack of fit and 1 indicates perfect fit. It indicates the relative amount of variances and covariances jointly accounted for by the hypothesized model. The AGFI for this path model is 0.75. Bagozzi and Yi (1984) suggest an AGFI value of 0.90 indicate a meaningful model. However, since 0.90 is only a guideline that errs on the side of conservatism, the AGFI leaves room for interpretation of what constitutes an appropriate level of fit.

An additional measure of overall model fit is the root mean square residual (RMSR). The RMSR indicates the average of residual variance and covariance. For this measure, a value under 0.05 suggests a good fit (Brown and Curdeck, 1993 as cited in Joreskog and Sorbom, 1993: 24). The RMSR for this model of 0.070 approaches the guidelines for a close fit.

The adjusted goodness of fit index and root mean square residual statistic indicate a mediocre overall fit of the path model. However Bagozzi (1993: 840) suggests:

Another approach to the assessment of goodness of fit is to use an

³¹Although AGFI does not depend explicitly on sample size, its distribution does (Joreskog and Sorbom, 1989).

index that is based on the comparison of the fit of a hypothesized model to the fit of a baseline model, such as the null model, where the latter assumes that all variables are uncorrelated (i.e., only error variances are estimated). Such an approach is termed an incremental fit index in that an hypothesized model is compared with a more restricted, nested model.

The LISREL 8 software calculates this comparative fit index (CFI). An index greater than or equal to 0.90 can be considered indicative of an adequate fit (Bentler, 1990). For this study, the CFI is 0.92. Thus, the path model explains a significant proportion of information, and any increase in fit would be minor.

Table 6.10 summarizes the global measures of fit for this study and compares them to baseline fit statistics.

Assessment of Internal Fit.

Although the global measures of fit address the overall adequacy of a model, they do not provide explicit information regarding the nature of individual parameters and other aspects of the internal structure of a model (Bagozzi and Yi, 1988). Therefore, it is recommended that the researcher examine the internal fit of the model. In the case of this study, an assessment of internal fit may help to identify problematic parameters leading to the mediocre global fit described in the previous section. The first step for assessing internal fit entails examining error variances.

Table 6.8 reports the error variance and R^2 for each of the composite. These error terms are usually interpreted as measurement error or observational error, and the R^2 is usually interpreted as the reliability of the observed measure, similar to Cronbach's Alpha (Joreskog and Sorbom, 1993). In general, the composites representing control mechanisms have higher

reliabilities (R^2 ranges from 0.59 to 0.92) than the composites representing coordination mechanisms (R^2 ranges from 0.24 to 0.95).³² Perhaps this is because the scales for control mechanisms have been tested and validated more extensively in organizational theory research than the measures for coordination mechanisms (refer to Cooke and Rousseau, 1988). The same occurrence is evident in the dependent variable measures. The two items measuring financial performance (R^2 of 0.21 and 0.79) and the client service skills composite measure (R^2 of 0.32 and 0.71) have lower reliabilities than the innovation (R^2 of 0.64 and 0.72) and human resource management (R^2 of 0.82 and 0.86) composite measures which have been validated and substantiated in Zahra's (1991) research and Bantel and Jackson's (1989) research, respectively.

In sum, the low reliability of the composite measures may contribute to the mediocre global fit, however Bagozzi and Yi (1988) suggest that after the examination of reliability, it is useful to look at the significance and direction of parameter estimates. Therefore, the next section examines the parameter estimates of the hypothesized model.

Evaluating the Hypothesized Model

The model developed in this dissertation hypothesizes that high performance results in PSFs when control and coordination mechanisms are employed to maintain a balance between the needs of human resources, the

³²Bagozzi and Yi (1988) suggest that a composite reliability of 0.60 or greater indicates a satisfactory internal fit.

demands of the client marketplace, and the financial performance goals of the PSF. To test this hypothesized model, the path analysis estimated four equations for each of the dependent variables: human resource management, client service skills, client service innovation, and financial performance.

Human Resource Management Performance in PSFs

For the equation predicting human resource management performance in PSFs, the three types of control mechanisms -- bureaucracies, clans, and intrapreneurship -- explain 40% of the variance, and the standardized path estimate for each of the control mechanism types is significant at the 0.05 level. In examining the direction of the parameters, the relationships are consistent with Hypotheses 1, 2, and 3a.

Bureaucratic Control Mechanism and Human Resource Management Performance. Hypothesis 1 predicts a negative relationship between bureaucratic control mechanisms and human resource management performance of PSFs. The results of the data analysis support this prediction (path coefficient of -0.27, $p < 0.05$). The negative, statistically significant relationship between the use of bureaucratic control mechanisms in PSFs and human resource management performance is consistent with past research that contends that professionals working in firms employing bureaucratic control mechanisms become dissatisfied with their jobs because their previous expectations of professional life are unfulfilled, and this results in low human resource management performance since professionals do not have discretion over their own decisions and behaviors (Montagna, 1974; Scott, 1982; Scott,

1985).

Clan Control Mechanisms and Human Resource Management

Performance. The second hypothesis postulates a positive relationship between clan control mechanisms and human resource management performance of PSFs. The data analysis supports this argument (path coefficient of 0.27, $p < 0.05$) that suggests that clan control mechanisms increase the PSF's ability to attract, effectively utilize, and retain highly qualified professional employees. Hence, it appears that in the sample of PSFs in this study, the employment of clan control mechanisms leads to higher human resource management performance because it provides a viable alternative to bureaucratic control mechanism by respecting the professional's desire for autonomy, but at the same time promoting a collegial work environment (Greenwood et al., 1990; Alvesson and Lindkvist, 1993). Moreover, the strong people-orientation of clan control mechanisms creates a work environment that emphasizes participativeness, consensus, and cohesion, and this positively affects the human resource management performance of PSFs.

Intrapreneurial Control Mechanisms and Human Resource Management

Performance. The path analysis shows support for the segment of Hypothesis 3a that argues the use of intrapreneurial control mechanisms will be associated with high levels of human resource management performance in PSFs (path coefficient of 0.24, $p < 0.05$). The employment of intrapreneurial control mechanisms accommodates the professional's need to act as an entrepreneur

by encouraging risk-taking and providing an empowered work environment. In turn, this enhances the PSF's ability to recruit, utilize, develop, and retain high achievers who thrive when working in an environment where individuals can set and accomplish their own goals, since these PSFs offer tremendous responsibilities and challenges in comparison to others in the industry (Von Glinow, 1985; Cooke and Rousseau, 1988).

The Mediating Effects of Human Resource Management. Hypotheses 1, 2, and 3a argue that human resource management performance mediates the relationship between the various control mechanisms (bureaucracies, clans, and intrapreneurship) and the PSF's financial performance. The path analysis supports this argument since the path leading from human resource management performance to financial performance is significant (path coefficient of 0.53, $p < 0.001$). In summary, the mediating effects of human resource management performance suggest that the usage of the appropriate control mechanisms not only affects human resource management performance, but also positively impacts a PSF's financial performance.

These findings are consistent with the assumption that effective human resource management practices improve financial performance, since PSFs can differentiate themselves from competitors and increase revenues by their ability to acquire and retain talented, knowledgeable employees (Maister, 1992). Furthermore, the use of the appropriate control mechanisms reduces the transaction costs associated with human resource management practices; thus the PSF becomes more efficient and improves its financial performance (Ulrich

and Lake, 1990). In PSFs, the cost reduction can be a direct result of savings from recruitment and turnover costs, or it can result because the appropriate control mechanisms shape and sustain employee behavior so that the manner in which employees perform their work translates into higher levels of productivity and quality client services.

Client Service Skills

For the equation predicting client service skills, human resource management performance, and two types of coordination mechanisms -- differentiation and external networks explain 41% of the variance. Surprisingly, only the two of the three paths are significant in this equation: (1) the path from human resource management performance to client service skills, which is strongly significant ($p < 0.01$); and (2) the path from external networks to client service skills ($p < 0.05$). This indicates that a PSF's ability to effectively manage its human capital and the external networks of its organizational members directly influences a PSF's client service skills performance. Moreover, the model suggests that human resource management and external networks are more essential than differentiation between departments in facilitating the development of client service skills in PSFs.³³

Differentiation and Client Service Skills. The data analysis fails to provide support for Hypothesis 4 which states that PSFs using differentiation as a coordination mechanism will have high levels of client service skills. This

³³A second path analysis was tested to examine if there is a direct relationship between differentiation and financial performance of PSFs. This path in the second model was not significant either.

finding is particularly interesting because the importance of differentiation as a coordination mechanism that enhances client service skills is at the core of much of the research relating to PSFs (Georgopoulos and Mann, 1962; Blau, 1970; Montagna, 1974). For instance, Eccles and Crane (1988) assert that the use of differentiation as a coordination mechanism in an investment bank enhances client service skills because the investment bank is able to more efficiently process deals and has greater knowledge of the markets it serves, and this knowledge assists the investment bank in improving pricing accuracy and reducing risks.

The context of this study may provide an explanation for the lack of relationship between differentiation and client service skills. In the public accounting industry, the employment of differentiation as a coordination mechanism has become a common practice because task complexity and regulation make differentiation essential (Montagna, 1974; Stevens, 1981; 1991). However, the standardization of this practice among public accounting firms may lessen the strength of differentiation as a means to improve client service skills. Instead, accounting firms are using other tactics to improve their client service skills, such as personalized services and geographical coverage (Arnett and Danos, 1979).

External Networks and Client Service Skills. The results of the path analysis suggest support for the segment of Hypothesis 5b that argues that PSFs employing external networks will have high levels of client service skills (path coefficient of 0.28, $p < 0.05$). These findings are consistent with past

research in other professional service industries, such as engineering firms, research and development laboratories, and investment banks (Allen, 1971; Katz 1988; Eccles and Crane, 1988). These studies show that organizational members in PSFs utilize external networks: (1) as a means of gaining fast access to knowledge and resources that they cannot secured internally; and (2) to validate internal expertise and learning capabilities (Powell and Brantley, 1992).

Furthermore, Baker (1992) contends that the task and environmental characteristic of PSFs necessitate external networks as a means of enhancing client service skills. A PSF's work requires interaction across organizational boundaries because for it to effectively service clients it needs to quickly process and customize large amounts of information from external parties (Eccles and Crane, 1988). Also, PSFs employing external networks as coordination mechanisms are better suited at adapting to complex, rapidly changing, and turbulent environments (Baker, 1992). For example, in investment banks external networks are used to managed the complex web of relationships professionals have with customer, suppliers, and competitors. Likewise, in public accounting firms Stevens (1981: 26) observes that external networks serve a twofold purpose: "To spread the firm's influence where it counts the most, and to drum up new business."

In sum, while many organizations buffer their "technological core" from the environment, this is not the case in high performing PSFs. Instead, through the usage of external networks, the PSF and its environment are closely intermeshed in the production of professional services, and this results in high

levels of client service skills.

The Mediating Effects of Client Service Skills. Hypothesis 4 argues that client service skills will mediate the relationship between differentiation and financial performance in PSFs and, similar to Hypothesis 4, Hypothesis 5b contends that client service skills will mediate the relationship between external networks and financial performance of PSFs. Because differentiation was not found to be related to client service skill, it is not possible, following Baron and Kenny's (1986) conditions, for client service skills to mediate the relationship between differentiation and financial performance in PSFs.³⁴ Although external networks are positively associated with client service skills ($p < 0.05$), the path between client service skills and financial performance is not significant, thus, indicating client service skills does not mediate the relationship between external networks and financial performance in PSFs.

Client Service Innovation

For the equation predicting client service innovation, the constructs that explain 73% of the variance include human resource management performance, intrapreneurial control mechanisms and two types of coordination mechanisms - integration and adhocracies. In contrast to the statistically significant path between human resource management performance and client service skills ($p < 0.01$), the path between human resource management performance and client service innovation is not significant and unexpectedly the direction of the

³⁴Baron and Kenny (1986: 1177) argue that to establish mediation, the independent variables must first affect the mediator and the mediator must affect the dependent variable.

path coefficient is negative. These results may imply that PSFs focusing their efforts on human resource management will have low client service innovation. An explanation for the negative relationship between human resource management performance and client service innovation is that the PSFs in the sample lack the ability to simultaneously "balance" their human resource management needs and their ability to innovate. This is consistent with previous research which concludes that organizations with high cohesion and morale, and emphasizing human resource, are successful in terms of sensitivity to customers and concern for employees (Cameron, 1978; Quinn and Rohrbaugh, 1983). However, these organizations score low in developing new and unique products or services because their overemphasis on human resource management weakens their ability to identify market opportunities or quickly implement the organizational changes needed to innovate (Quinn and Hall, 1983).

Maister's (1992) case studies of PSFs provides a similar rationale for the negative relationship between human resource management performance and client service innovation in PSFs. He asserts that PSFs which have a strong emphasis on human resource management practices are less capable of innovating in the short-term because in many instances these PSFs are successful in other areas of performance (e.g., client service skill and financial earnings). Therefore, these PSFs become complacent with their management practices and strongly committed to their present way of doing things, and this results in an insensitivity to shifts in the environment that demand changes in management practices and innovation.

Intrapreneurial Control Mechanisms and Client Service Innovation.

Hypothesis 3b postulates that PSFs employing intrapreneurial control mechanisms will have high levels of client service innovation. The data analysis suggests strong support for this hypothesis (path coefficient of 0.61, $p < 0.01$). These findings sustain the idea that when a PSF "champions" intrapreneurship through encouraging risk-taking, individual initiative and freedom, it is more successful at developing new and unique services because its professional employees are empowered to experiment and innovate (Eccles and Crane, 1988; Maister, 1992).

Integration, Adhocracies, and Client Service Innovation. The data analysis provides mixed results for the segment of Hypothesis 5a which states that the use of integration and adhocracies as coordination mechanisms in PSFs will increase client service innovation. The path from integration to client service innovation is significant ($p < 0.05$), but the path from adhocracies to client service innovation is not significant. The statistical support for integration is expected since the literature on innovation suggests that the employment of integration as a coordination mechanisms is strongly correlated with an organization's ability to innovate because these type of coordination mechanisms facilitate the dispersion, cross-fertilization, and survival of new ideas within an organization (Aiken and Hage, 1971; Kanter, 1988; Damanpour, 1991).

However, the lack of support for adhocracies is surprising since both the integration measures and the adhocracy measures ascertain the extent to which

professionals share information and skills. The difference in these measures is that the integration construct represent: (1) joint activities between departments (e.g., training, planning, job rotation, conflict resolution, etc.); and (2) opportunities for organizational members to share information (e.g., educational seminars, electronic mail systems, in-house journals, etc.), whereas, the adhocracies measures assess the extent a PSF brings together professionals from the different functions, different hierarchical levels, or the various local offices of a firm for client engagements.

An explanation for the lack of statistical support for adhocracies is that even though accounting firms in this sample utilized adhocracies as a coordination mechanism for client engagements, in most instances, these teams are only brought together to solve routine client problems (Stevens, 1981). Thus, there is no pressure for these teams to innovate. Hinings et al. (1991) found in their research on PSFs that adhocracies hinder innovation because teams become too autonomous and decentralized. Hence, the PSF's authority system is unprepared for formulating and implementing long-term strategic changes throughout the organization, and organizational members lack the commitment to develop and implement new ideas. However, Hinings et al. (1991) discovered that when the PSF in their case study added integrative coordination mechanisms, (e.g., meetings, committees, planning sessions, etc.) it was more successful at innovating.

The Mediating Effects of Client Service Innovation. Hypothesis 3b asserts that client service innovation will mediate the relationship between intrapreneurial control mechanisms and a PSF's financial performance, while

Hypothesis 5a states that the increase in client service innovation resulting from the use of integration and adhocracy as coordination mechanisms will positively affect a PSF's financial performance. The path leading from client service innovation to financial performance is significant (path coefficient of 0.36, $p < 0.05$). The significance of the paths from intrapreneurial control mechanisms and integration to client service innovation and the path from client service innovation to financial performance, supports the argument that when a PSF employs intrapreneurial control mechanisms and integrative coordination mechanisms, it is more focused on designing innovative client services, and because of this, the PSF has higher levels of financial earnings.

However, because adhocracies was not found to be related to client service innovation in the analysis, it is not possible, following Baron and Kenny's (1986) conditions of mediation, for client service innovation to mediate the relationship between adhocracies and financial performance.

Financial Performance of PSFs

The fourth equation modeled in the path analysis explains 36% of the variance in financial performance of PSFs. Three paths were modeled to lead from human resource management performance, client service skills, and client service innovation to financial performance. The only path of the three that is not significant is the path from client service skills to financial performance.³⁵ An explanation for the non-significance of the path from client service to

³⁵Also, surprisingly, the direction of the coefficient for this path is negative.

financial performance is that in the sampled professional service industry -- public accounting -- client service skills is commonly employed as a differentiation strategy by the majority of firms (Arnett and Danos, 1979; Stevens 1981; 1991).³⁶ Thus, since there is little variance in client service skills among competitors in the public accounting industry, the effects of a firm's client service skills on its financial performance are minimal. The sample's high mean (5.36 on a 7-point scale) and low standard deviation (0.59) of the client service skill construct provide some evidence to support this argument. Buller et al. (1989) found similar results in their research of the legal industry and concluded that because law firms have historically based their competitive strategies on client service skills (e.g., expertise, quality, reputation, etc.), there is little variance in how client service skills affect financial performance.

Although the path from client service skills to financial performance is not significant, the path from client service innovation to financial performance (path coefficient of 0.36, $p < 0.05$) and the path from human resource management performance to financial performance (path coefficient of 0.53, $p < 0.01$) are significant. These findings suggest that PSFs who adopt non-traditional methods of competing, such as aggressive marketing or the selling of innovative services, in order to truly differentiate their services will achieve financial success. In addition, the results indicate that PSFs which find ways to use their professional staff will achieve superior financial performance (Beck-

³⁶Porter (1980) defines a differentiation strategy as one in which a firm creates a unique product, service, technology, or market dimension to distinguish the firm from its competitors.

Dudley and Buller, 1988; Buller et al., 1989).

The importance of human resource management as a determinant of a PSF's financial success is not an unanticipated finding. Because PSFs are labor intensive, it is reasonable to assume that a PSF's financial earnings will be directly associated with the extent to which it can attract, develop, and maintain a highly capable and productive work force. Moreover, these findings are consistent with the strategic human resource management research that contends that firms can capitalize on superior human resource management practices as a means of gaining and maintaining a competitive advantage (Schuler and MacMillan, 1984; Wright and McMahan, 1992). This is because human resource management systems influence the behavior of organizational members and comprise many of a firm's vital processes, including recruitment, selection, appraisal, training, and retention of talented employees -- activities that are indispensable to firms seeking growth and prosperity (Swiercz and Spencer, 1992). In other words, the benefits associated with a PSF's ability to attract and retain qualified employees who are motivated to perform are numerous (i.e., higher revenue and lower costs), and lead to a substantial advantage in the marketplace when competitors do not have the right people motivated to perform.

In addition to superior human resource performance, the path analysis emphasizes the importance of client service innovation as a determinant of financial performance in PSFs. Given that no support was found for the importance of client service skills as a determinant of financial performance, this suggests that an innovation strategy is more essential than a strategy

based on skills. These results tend to support the notion that the capability to develop new services or tackle new markets is a vital factor in determining the financial success of a PSF because it is an effective strategy for differentiating PSFs with similar client service skills (Maister, 1992).

Chapter Summary

This chapter provided the results of the data analysis and tests of the hypotheses from Chapters III and IV. Strong support was found for the hypotheses that link control mechanisms with various dimensions of PSF performance. In addition, the findings indicate external network and integration are positively associated with high levels of client service skills and innovation in PSFs. In contrast, little support was found for the hypotheses linking the coordination mechanisms -- differentiation or adhocracies to the performance variables, or for the mediating effects of client service skills. Not only was strong support found for the mediating effects of human resource management performance and client service innovation with various types of control mechanisms and integrative coordination mechanisms, but the data analysis also indicates that these two constructs are key determinants of a PSF's financial earnings.

CHAPTER VII

DISCUSSION AND IMPLICATIONS OF RESEARCH FINDINGS

Chapter VII discusses the contribution of this dissertation to organizational theory and corporate strategy research by integrating the study's major research findings. In addition, the managerial implications of the study are examined in this chapter. Lastly, this chapter highlights the limitations of the study and suggests directions for future research.

Dissertation Contribution

Barney (1992) argues that much of the previous efforts to integrate organizational theory and strategic management research have been limited to strategy process issues, such as studies, which examine the processes through which strategic choices are made, and the methods through which strategic decisions are implemented. However, he contends that there is little strategic management research that examines the competitive implications of such classic organizational behavior phenomena, such as organizational culture, teamwork, reputations, and trust. Therefore, there is need for more strategic management research which incorporates organizational theory concepts. Given Barney's challenge, this dissertation contributes to the stream of research that integrates organizational theory with strategic management by examining the research question -- what types of control and coordination mechanisms are associated with the high performance of PSFs.

Contribution to Organizational Theory Research

More specifically, through providing theoretical and statistical support, this dissertation makes a contribution to organizational theory research by identifying types of control mechanisms in PSFs that encourage professionals to behave in a manner compatible with organizational goals.

Bureaucratic Control Mechanisms in PSFs. One of the foremost challenges addressed in organizational theory research is how to reconcile the differences between an individual's self interest and his or her desire to contribute to an organization's goals. In many instances, professional employees of PSFs are intrinsically motivated to make commitment to their jobs, and their self-interest is overridden in a work environment where the goals are aligned with their owns (Raelin, 1986; Simons, 1995).

This study revealed that bureaucratic control mechanisms in PSFs fail to motivate organizational members and resulted in negative performance consequences, thus, have little value to PSFs. These findings suggest that bureaucratic control mechanisms no longer suffice in the competitive environments of PSFs, where employee initiative and creativity are critical to success. This is because with traditional command-and-control, bureaucratic techniques professionals began to feel alienated, demotivated, and isolated from decision making, and the consequences of these types of control mechanisms has been cynicism, and a temptation for professionals to ignore or disregard senior management's goals (Jack, 1994).

Clan Control Mechanisms. Hence, this study findings support Ouchi's

(1980) view that when bureaucratic control mechanisms fail, organizations will search for alternative forms of control. In contrast to bureaucratic control mechanisms in PSFs, it appears that clan control mechanisms are successful in increasing the commitment of organizational members through goal alignment. In the context of this study, the goal alignment resulting from clan control mechanisms lead to high levels of human resource management performance, which enhances the PSF's client service skills, client service innovation, and ultimately its financial performance.

Interestingly, these findings are consistent with the popular business presses' description of current management trends in PSFs. For instance, Hodgart a consultant to PSFs, contends that many PSFs are eliminating bureaucratic control mechanisms and implementing alternative corporate structures that encourage shared values and consensus decision-making (Jack, 1994). Hodgart also notes that the most successful PSFs, (e.g., Arthur Andersen, Goldman Sachs, and Mckinsey) have always encouraged clan control mechanisms because this results in professional employees and partners understanding the PSF's goals and the willingness of them to commit to the PSF's strategy.

Likewise, Maister (1995) concludes from his own experiences in consulting to PSFs that when social control mechanisms (in contrast to bureaucratic control mechanisms) are employed, partners and staff take a direct, vested interest in the PSF's goals by conforming to its beliefs regarding technology, pricing, associate development, team practice, or client service, and this creates value in the marketplace (Brill and Dillon, 1995).

Intrapreneurial Control Mechanisms. Another contribution of this dissertation is that it demonstrates that successful PSFs combine clan control mechanisms with intrapreneurial control mechanisms. The intrapreneurial form of control has not been identified in past research on control mechanisms which segments output controls from ritualized controls, as depicted in Figure 3.1 (Ouchi, 1977; 1980). The findings of this study suggest that in PSFs intrapreneurial control mechanisms are a hybrid of output controls and ritualized controls. Intrapreneurial control mechanisms use output controls by offering explicit incentives for organizational members to be creative, take initiative, and take moderate risks. However, the driving force behind the success of intrapreneurial control mechanisms in PSFs is their ritualized or normative dimension (Cooke and Rousseau, 1988).

Much of the normative dimension of intrapreneurial control mechanisms results because their usage is combined with clan control mechanisms which provide organizational members with a clear understanding of the basic purpose, values, and direction of the PSFs. The shared values created by clan control mechanisms guide organizational members to act in the best interest of the PSF, and therefore, because of this atmosphere of trust, intrapreneurial control mechanisms can effectively empower employees to experiment and seek opportunities that result in innovative strategies (Simons, 1995).

Consequently, PSFs employing intrapreneurial control mechanisms are not only more responsive to their clients' demands for innovative services, but also the needs of their professional employees -- to think in unique and independent ways and take moderate risks. Furthermore, when PSFs employ

both clan control mechanisms and intrapreneurial control mechanisms, they compensate for the weaknesses of clan control mechanisms -- the inability to innovate and to adapt to environmental changes, and this results in employees capable of responding to market threats and opportunities in a manner consistent with the PSF's strategic goals.

Contribution to Corporate Strategy Research

In addition to making a contributions to organizational theory research, this dissertation contributes to corporate strategy research: (1) by providing empirical support that validates the significant role that control and coordination mechanisms play in the development of organizational resources in PSFs; and (2) by empirically examining how through the creation of organizational resources, control and coordination mechanisms affect the "strategic balancing" of multiple dimensions of performance in PSFs.

Control Mechanisms and Organizational Resources. The findings of this study provide strong empirical evidence that in PSFs when the appropriate control mechanisms are not aligned with the attitudinal attributes of professional employees, such as bureaucratic control mechanisms, they have little value to the PSF, and consequently, this result in a competitive disadvantage.³⁷ This is because a PSF's resources can only be a source of competitive success when they are valuable. As discussed earlier in Chapter II, resources are only valuable when they enable a PSF to conceive or

³⁷Barney (1991, 1992) contends that if a socially complex organizational phenomena or resource is not valuable to a firm, it will result in a competitive disadvantage.

implement strategies that improve its efficiency or effectiveness.

Therefore, this study findings validate the idea that when a resource is non-valuable it will result in negative performance consequences. The rigid rules, close supervision, and authority by rank associated with bureaucratic control mechanisms in PSFs results in a demotivated workforce. This leads to ineffective human resource management practices, and because of this employee productivity decreases, and the PSF is unsuccessful in the marketplace, and this is evident by its low levels of financial performance.

In contrast to bureaucratic control mechanisms, clan control mechanisms and intrapreneurial control mechanisms are valuable to PSFs because they create shared organizational values and beliefs, which guide employee behavior and provide them with an intangible motivation to channel their efforts toward organizational goals (Wilkins, 1989). Although clan control mechanisms and intrapreneurial control mechanisms are valuable to PSFs, and because of this lead to positive performance consequences in PSFs, it is the rareness and imperfect imitability of these control mechanisms that result in the competitive success of PSFs.

If a large number of PSFs in an industry employed the similar types of clan control mechanisms or intrapreneurial control mechanisms, then each of these PSFs would have the capability to exploit these organizational resources in the same manner, thereby, giving no one PSF a competitive advantage. However, the mix of personalities, specific historical conditions, organizational skills, and support systems of a PSF are why control mechanisms are rare resources. Moreover, the unique experiences of a PSF's employees and its

history are difficult for competitors to duplicate, thus when control mechanisms are removed from their original context, there is no guarantee they will work in a new setting.

This duplication is difficult because of the tacit nature of clan control mechanisms and intrapreneurial control mechanisms. Tacit organizational resources are the consequence of the habits, memories, skills, and commitments of a firm's employees (Nelson and Winters, 1982; Wilkins, 1989). These resources are "invisible" assets based upon an organization's accumulated learning over time and refined by its practices and routines (Itami and Roehl, 1987). Furthermore, these resources are considered "invisible" because in many cases they are taken for granted, and so much ingrained in a firm's business practices, that often managers inside the firm cannot explain the behaviors involved to create the resources or realize the strategic implications of these resources (Polanyi, 1958; Barney, 1992).

In the case of PSFs, the end result of the tacitness, and thus imperfect imitability of clan control mechanisms is a work environment where partners define the values and direction of the PSF by: (1) asserting uniqueness, (2) providing prestige to group membership, and (3) using formal beliefs as symbols of what the PSF represents (Maister, 1985a; Simons, 1995). These actions increase employee commitment and reinforce the distinctiveness of the PSF. In addition, these actions result in organizational members that act cooperatively, in the best interest of the PSF, and refrain from opportunistic behavior because of belief they will be rewarded fairly for their contributions in the long-term.

Similar to clan control mechanisms, intrapreneurial control mechanisms in PSFs create "invisible" assets by encouraging individual-centered values and competitive values (Zahara, 1991). The individual centered values promote creativity and encourage risk-taking, and this develops an internal climate that enhances the integration of employees and the PSF's goals. As a result, employees explore viable means, contribute new ideas, and take on new ventures to ensure the PSF's successful performance. The competitive values created by intrapreneurial control mechanisms encourage aggressive responses to environmental moves, and employees are motivated to monitor industry trends, experiment with new ideas, initiate new corporate ventures, and capitalize on emerging opportunities in the marketplace, and consequently this leads to high level of innovation.

Jack (1994) in his research on PSF provides an example of the strategic implications of tacit control mechanisms. He observes that many public accounting firms have mistakenly believed they could mimic Arthur Andersen's tight managerial controls but have been unsuccessful. Andersen's "tight centralized" control mechanisms work because they continue to involve its partners actively in strategy discussions. These control mechanisms also work for several other reasons. First, Arthur Andersen has grown organically rather than through mergers, with partners around the world sharing a common culture, training, and approach. Second, Arthur Andersen retains a strong element of democracy, with partners voting on the admission of their peers, and being consulted on the appointment and performance of their managing partners. Lastly, but perhaps most importantly, partners are also receptive to

the strategy adopted by the firm because of its success since Arthur Andersen is widely perceived as having the highest levels of profits and growth in the public accounting industry. In summary, Jack (1994) concludes that Arthur Andersen's competitive advantage in the public accounting industry and consulting industry stems from the inability of its competitors to duplicate its control mechanism because of Arthur Andersen's unique history and deeply ingrained management practices.

Integration and Organizational Resources. Furthermore, the results of this dissertation provide empirical support that integrative coordination mechanisms are significant determinants of a PSF's ability to develop socially complex organizational resources that lead to superior client service performance and financial performance. These findings support recent research on integrative coordination mechanisms that argues today's complex business environment demands: firms to combine multiple business units under the same corporate umbrella; tackle global competition through strategic alliances; and manage technology that expedites the imitation of competitive processes, it is difficult for individuals within companies to comprehend an overall organizational purpose and direction (Bartlett and Goshal, 1991; Simons, 1995). Therefore, in PSFs integration is needed to assist in the management of these challenges by bringing together organizational members that are interdependent and to facilitate knowledge dispersion throughout the organization.

Integrative coordination mechanisms produce organizational resources

that are difficult for a PSF's competitors to replicate because they are a very complex social phenomena that success is derived from the varied groupings of individuals and the quality of their connections and relationships (Barney, 1991; Wilkins, 1989). Hence, the organizational competencies developed from a PSF's integrative control mechanisms are a result of collective skills and complex relationships, and the mixture of these skills or individuals can vary depending on the situation.

For example, the public accounting firm, KPMG Peat Marwick use of a electronic groupware mail system allowed it to submit a request for a proposal made at 3:00 p.m. on a Friday for a "major technology overhaul" of an insurance company by noon on Monday. Over the weekend, four partners in four cities prepared a proposal using the firm's new Knowledge Manager system. Consequently, KPMG Peat Marwick won the engagement, beating EDS, IBM, and Coopers & Lybrand.

External Networks and Organizational Resources. In addition to this study reinforcing the importance of integration, it provides support for the significance of external networks as a coordination mechanism that creates socially complex organizational resources which enhance client service skills in PSFs. This is because the contacts established with clients, government agencies, research institutions, and even competitors through external networks provide a means for a PSF to monitor its external environment and gain knowledge that it does not already possess (Hall, 1992).

Similar to integrative coordination mechanisms, Williams (1992) argues

that external networks create resources that lead to competitive advantage because their idiosyncratic characteristic "strongly shields" them from competitor imitation. He also notes that these relationship-based advantages are often so complex that they cannot be duplicated by the organization itself.

He cites the example of Goldman Sachs' and Salomon Brothers' success in developing "private" relationships with clients. These relationships are based on bolstering personal contact through the "old boy network" and take a long time to grow and nurture. Therefore, these investment banks can demand a premium price for their services because in addition to banking services these clients are willing to pay for the established network contacts and "special" relationships.

Gallagher in her research on law firms provides a "real world" illustration of the effectiveness of external networks in PSFs. She uses the example of an attorney, who learned his firm wanted to explore new practice areas opportunities, and from a conversation with a business associate discovered medium-sized travel agents were without lawyers, but needed them to advise on customer-oriented travel regulations. The lawyer orchestrated the development of a full travel and legal practice in his law firm, which is now among London's largest and grosses \$700,000 annually.

Lack of Support Between, Differentiation, Adhocracies, and Organizational Resources. Although the data analysis provides strong support for the significance of integration and external networks in PSFs, it provides little support that differentiation and adhocracies facilitate the development of

socially complex organizational resources that distinguish the performance of one PSF from another. However, these findings validate the assumption that for a firm's attributes or assets to develop organizational resources, it must be rare. In the case of this study's context -- the public accounting industry -- it appears that the use of differentiation, and adhocracies as coordination mechanisms are a common practice, and thus are not rare (Arnett and Danos, 1979; Stevens, 1981).

This is consistent with Barney's (1992) argument that many valuable resources can be rare in one industry, but common in another, and if a socially complex phenomena is common among a set of competing firms, they cannot be sources of competitive advantage, and thus firms will develop other socially complex organizational resources.³⁸ The non-rarity of adhocracies and differentiation in the public accounting industry may result because these coordination mechanisms can be codified and clearly understood, and are thus, easy for a PSF's competitors to duplicate.

As Barney (1991) observes, when a firm's resources and its sustained competitive advantage are poorly understood by both the firm and its competitors, it is difficult to duplicate the resource through imitation. This is because the firm or its competitors don't know which resources to duplicate, or how to duplicate them. However, it should be noted that if a firm understands the linkage between its resource and its advantage in the

³⁸Barney (1992) provides the example of how a corporate culture committed to long hours, innovation, creativity, and free thinking may be very common among software companies, but extremely rare among large U.S. automobile companies.

marketplace, then its competitors can learn about the linkage, acquire the necessary resources, and implement the relevant strategies.

In the case of public accounting firms, the commonality and replication of differentiation and adhocracies by competitors are evident, and this has lead firms to develop other tactics for coordinating their human resources. For instance, in response to clients' demands, both KPMG Peat Marwick and Coopers & Lybrand are restructuring teams of professionals with a range of skills to service particular industry sectors, instead of employing differentiation organized around traditional functions, such as tax and consulting (Jack, 1994; Maister, 1994b). Moreover, the problems associated with functional differentiation -- lack of trust across departments; partners protecting their individual clients relationships; and incentive systems that cause partners to worry more about their department's revenues than helping other departments within the firms appear to hinder the development of socially complex organizational resources.

Given that the lack of support for differentiation and adhocracies may be influenced by the study's context or the measures used, future research should be done using other professional service industries or different measures of adhocracies and differentiation to determine if coordination mechanisms facilitate the development of socially complex organizational resources in PSFs.

Table 7.1 summarizes this dissertation contribution to corporate strategy research. It depicts a resource-based view of control mechanisms and coordination mechanisms in PSFs. This table shows that because bureaucratic control mechanisms are non-valuable to PSF, they result in a competitive

disadvantage. However, clan control mechanisms and intrapreneurial control mechanisms are valuable assets to a PSF, and because their tacit nature prevents duplication by competitors, these control mechanisms lead to the competitive success of PSFs. Similarly, integrative coordination mechanisms and external networks result in competitive success of PSFs because the socially complex relationships they develop are difficult for competitors to replicate. However, differentiation and adhocracies are valuable, but easy to duplicate, therefore PSFs employing these types of coordination mechanisms will have competitive parity.

Strategic Balancing and Performance of PSFs. Much of the earlier research in the field of organizational behavior and organizational theory focused on understanding the relationship between individual or group phenomena and a firm's performance, but many of these efforts have been abandoned instead for research that focuses on the consequences of individual and group behavior in organizations, without any consideration for the performance implications (Perrow, 1986). However, in order to integrate organizational behavior and strategic management research, an interest in how different organizational phenomena either add to or subtract value from a firm needs to be rekindled (Barney, 1992).

Therefore, another contribution of this dissertation is that it studies a much neglected area of management research -- PSFs by linking ideas from organizational theory to performance outcomes often studied by corporate strategy researchers. PSF performance was modeled as the ability to strategically "balance" the demands of the client marketplace, the PSF's

human resource needs, and the economic goals of the PSF. This study revealed that key determinants to balancing these often conflicting performance goals are control mechanisms, integrative coordination mechanisms, and the external networks of professional employees.

In addition, the results of this study contribute to the stream of research that supports the belief that human resource management practices and innovation have positive financial consequences to PSFs. It appears that those PSFs able to simultaneously emphasize human resource management and client service innovation are the high performers. Hence, it can be concluded that a PSF's ability (1) to recruit, retain, and develop its human capital so that the needs of the clients are met; and (2) to develop organizational systems that facilitate innovation serve as an effective strategy for a PSF to differentiate its client services from its competitors.

Contribution to Practice

A greater understanding of the management practices of successful PSFs also has implications for practice. In previous organizational theory and corporate strategy research, PSFs were rarely analyzed -- partly because of their own secrecy. However, as more of the workforce becomes professionalized, understanding the management of professional workers will not only be essential to PSFs, but for other types of firms, as well. Kiechel (1994: 68) observes:

That for managers to succeed in the new economy, they must begin with an understanding of the biggest, fast growing, overlooked sector of the work force: professional and technical workers. Already the largest occupational group, surpassing clerical and operative, and it is not

unlikely that one out of every four job created between now and 2005 will be theirs. Even more important, they are the people whom managers will have to manage; the nature of their careers, and what such workers need and demand will shape managerial careers.

Hence, this study provides the first theoretical and empirical examination of some of the assertions made in the popular press literature (e.g., Maister, 1992; Peters, 1992) regarding the management of PSFs, professionals, and knowledge workers. Also, the findings suggest some issues for organizations to consider if they desire to succeed both in the management of professionals and achieve superior performance.

First, this dissertation reemphasizes that traditional means of gaining competitive advantage such as offering high quality services or using the most sophisticated technology to service clients must today be supplemented by organizational capability -- an ability of a firm to manage people to gain a competitive advantage (Ulrich and Lake, 1990). This demands that PSFs focus their internal processes to ensure that the skills and efforts of employees are directed toward organizational goals and meeting clients' needs.

Second, this study highlights and supports the importance of using normative control (such as clans and intrapreneurship) in contrast to utilitarian controls (such as bureaucracies) when managing professionals. Consistently, the popular managerial press has conveyed this idea. For instance, Maister (1992) asserts that the key attributes of high-performing PSFs is that they develop strong cultures by creating shared values and emphasizing human resource management practices, and this leads to employee loyalty. Likewise, Kunda (1992) argues that organizations are most successful when they

encourage self-direction, initiative, and emotional attachment, and ultimately combine the organization's interest in productivity with their professional employees' personal interest in growth and maturity.

Third, this research presents findings that support the significance of coordination mechanisms when managing professionals. In the new knowledge economy, integrative coordination mechanisms and external networks are necessary for firms to add value to the skills of their professional employees. This is because in the next millennium the firms that will triumph are the ones that create a "learning organization" -- one where organizational members can constantly share their knowledge and obtain information from not only group members, but also professionals in other departments and external stakeholders, such as competitors, suppliers, and customers.

Directions for Future Research

Future research should extend and refine this study by addressing some of its limitations. A number of steps for future research are outlined below.

New Sample to Enhance Generalizability

To enhance the generalizability of the findings, additional data could be collected from (1) other professional service industries (e.g., advertising, architecture, law), (2) from staff members of PSFs, and (3) from industrial firms with a high percentage of professionals, such as firms in the pharmaceutical or software industries.

First, the generalizability of this research is limited because the sample

is drawn from a single industry. The findings regarding the relationships hypothesized may be different in other professional service industries. In addition, because a single industry sample is employed, the variances in the constructs that measure control and coordination mechanisms, as well as performance, may be constrained. Despite the fact that data was only collected from the public accounting industry, the sample is highly diverse in terms of firm size, services offered to clients, and geographical location, and this intra-industry diversity helps to minimize the limitation inherent in a single industry sample. Nevertheless, it would be interesting if future research compared and contrasted these findings from the public accounting industry with other professional industries.

The legal industry would be an appropriate context for future research because law firms confront challenges similar to the public accounting industry. "The economic and competitive environment in which law firms grew, prospered, and expanded to previously undreamed-of size and prosperity is collapsing" (Kuhlman and Santiago, 1994: 44). In the increasingly competitive legal market, managing a law firm has become a complex business, where true-and-ried methods of firm management no longer work.

Second, the majority of the respondents in this sample are administrators, managers, or partners. However, junior staff members are a significant percentage of a PSF's human capital and responsible for much of the daily contact with clients. Therefore, future research should include staff members as respondents to ascertain if differences exist between their perceptions of the PSF's control and coordination mechanisms and the

perceptions of managers and partners, and if differences do exist, how does this affect performance?

Third, future research applying the findings of this study is needed in "non-professional" service industries because the majority of professionals work in these industries, and the percentage of professionals working in "professional service industries" is steadily decreasing (Sass, 1990).³⁹ Thus, it would be interesting to examine if the hypotheses proposed in this study are supported in firms that are not in a professional service industry, but employ a high percentage of professionals.

Inclusion of Control Variables

Future research exploring this topic should include control variables in the data analysis. The size limitation of this sample and the data analysis techniques which were employed prevented segmenting the sample into smaller sub-samples. However, it would be fascinating to see if differences in size, markets served, or geographical location influence which control and coordination mechanisms affect PSF performance.

Reexamination of Coordination Mechanisms

Because only little support was found for the relationship between differentiation or adhocracies and PSF performance, future research may want to employ other measures of coordination mechanisms or link coordination

³⁹Sass observes that the Bureau of Census considers eight industries as professional services: accounting services, education, engineering, and architectural services, hospital and other health care, legal services, welfare and religious services, and "other" professional services (e.g., consulting, advertising, etc.).

mechanisms to other performance outcomes. For example, future research could examine what types of coordination mechanisms amplify or dampen knowledge diffusion within PSFs, or how coordination mechanisms ensure that the knowledge of the local offices of a PSF is transformed into firm-wide competitive capabilities.

In addition, future research should develop alternative measures for integration and external networks. The measures of the present study suggest lack of discriminant validity between integration and external networks. This may be a result of the study's context. Perhaps, in public accounting firms integration and external networks share a similar purpose. This is true in the case of high performing research and development laboratories, where professionals communicate with external stakeholders as much as organizational colleagues (Kanter, 1977).

Conclusion

Notwithstanding the limitations of this study, this dissertation has attempted to integrate organizational theory and corporate strategy research in an effort to study how control and coordination mechanisms develop socially complex organizational resources that affect the performance of PSFs. An empirical assessment employing causal modeling was undertaken to assess this relationship. Major findings were reported and discussed, and directions for future research have been recommended. Research with additional samples or that operationalizes coordination mechanisms differently is suggested to further examine and evaluate the findings of this study.

FIGURES

Figure 1.1

RELATIONSHIPS OF PRINCIPAL RESEARCH TERMS

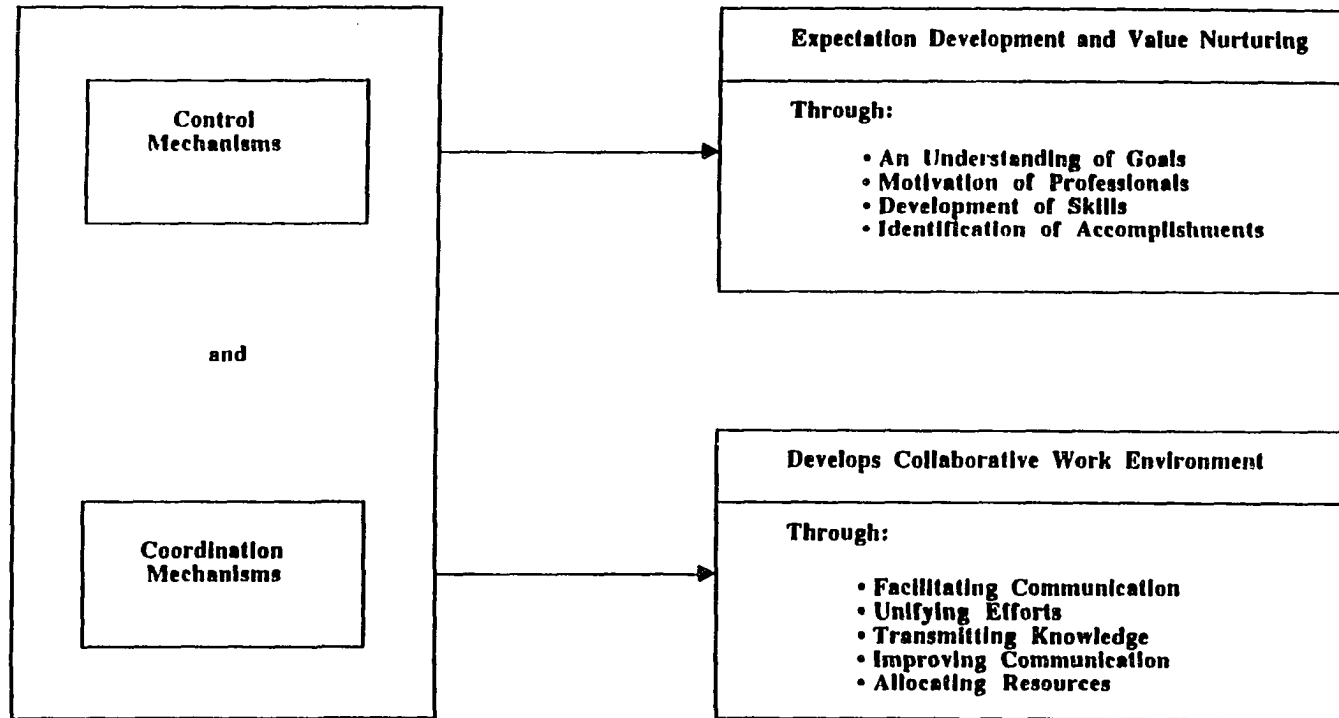


Figure 1.2
CONCEPTUAL MODEL

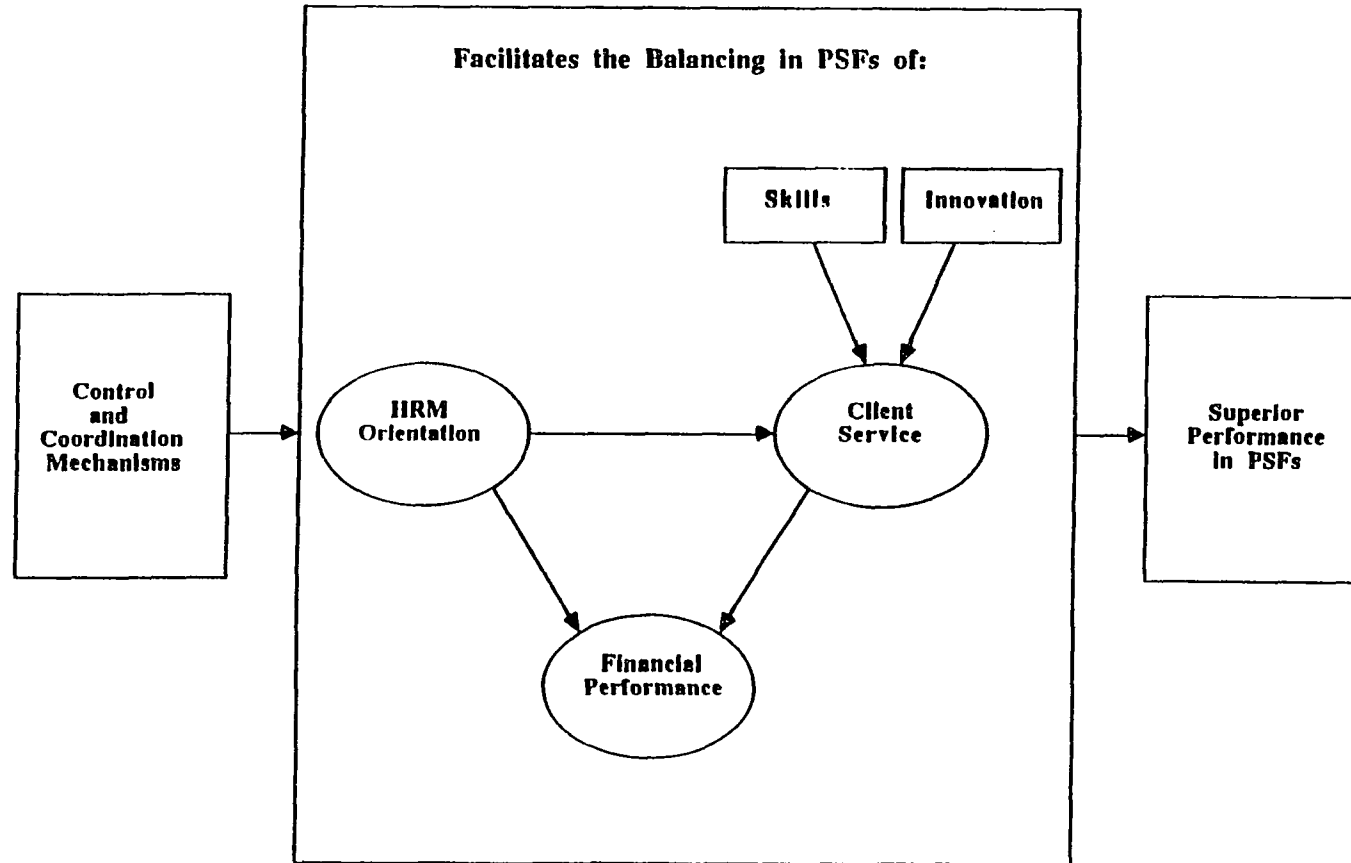
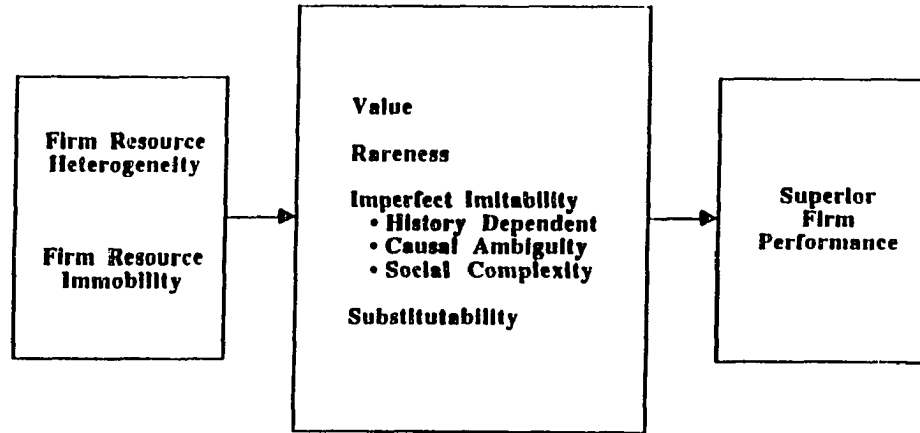


Figure 2.1

THE FUNDAMENTALS OF RESOURCE-BASED THEORY OF THE FIRM



Adapted from Barney (1991)

Figure 2.2

SOCIALLY COMPLEX ORGANIZATIONAL RESOURCES IN PSFs

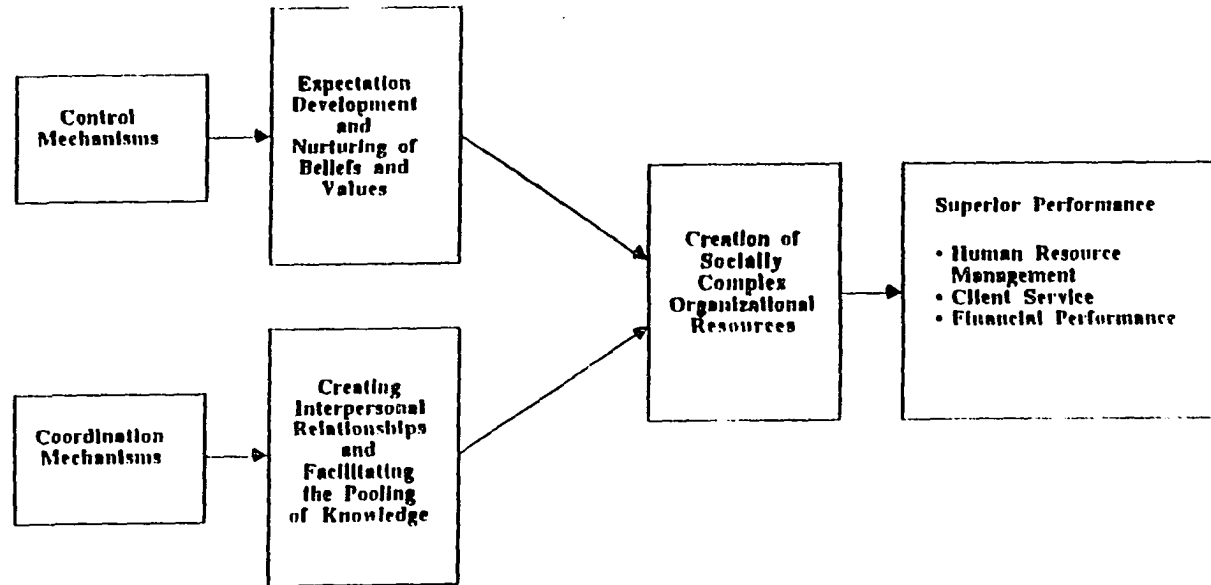


Figure 3.1

CONTROL TYPE AND ITS ANTECEDENT CONDITIONS

		Knowledge of Transformation Processes	
		Perfect	imperfect
Availability of Output Measures	High	Behavior Control or Output Control (Tie can plant)	Output Control (Life insurance agency)
	Low	Behavior Control (Double play combination)	Ritual (Foreign service)

Source: Ouchi (1977)

Figure 3.2

BUREAUCRATIC CONTROL MECHANISMS

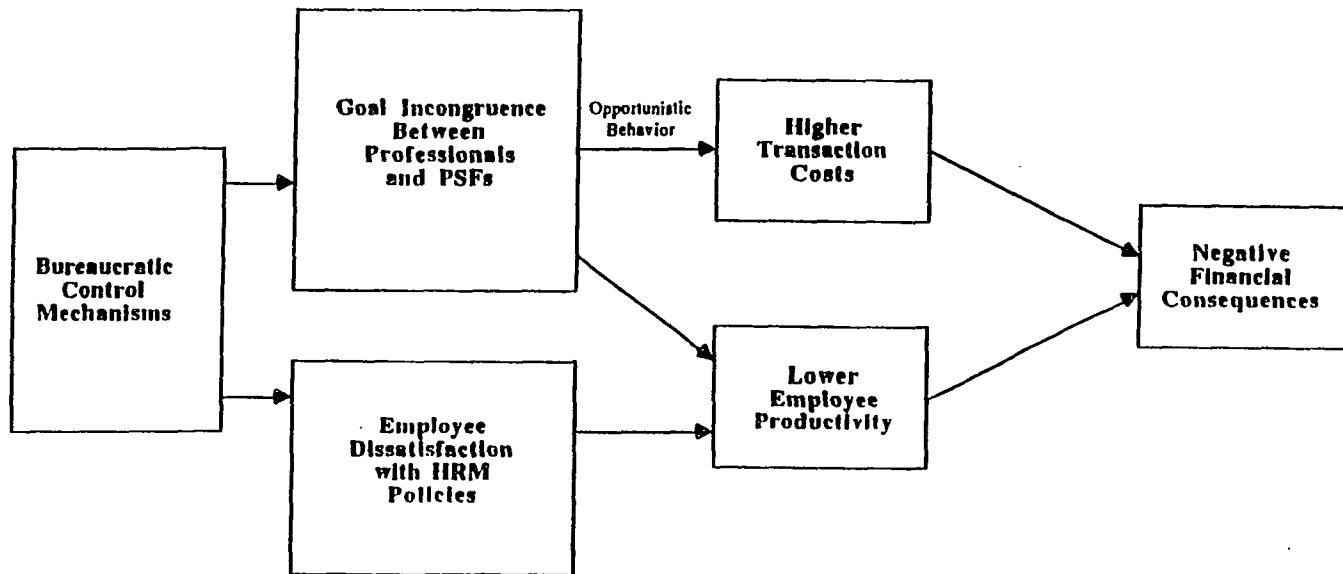


Figure 3.3

CLAN CONTROL MECHANISMS IN PSFs

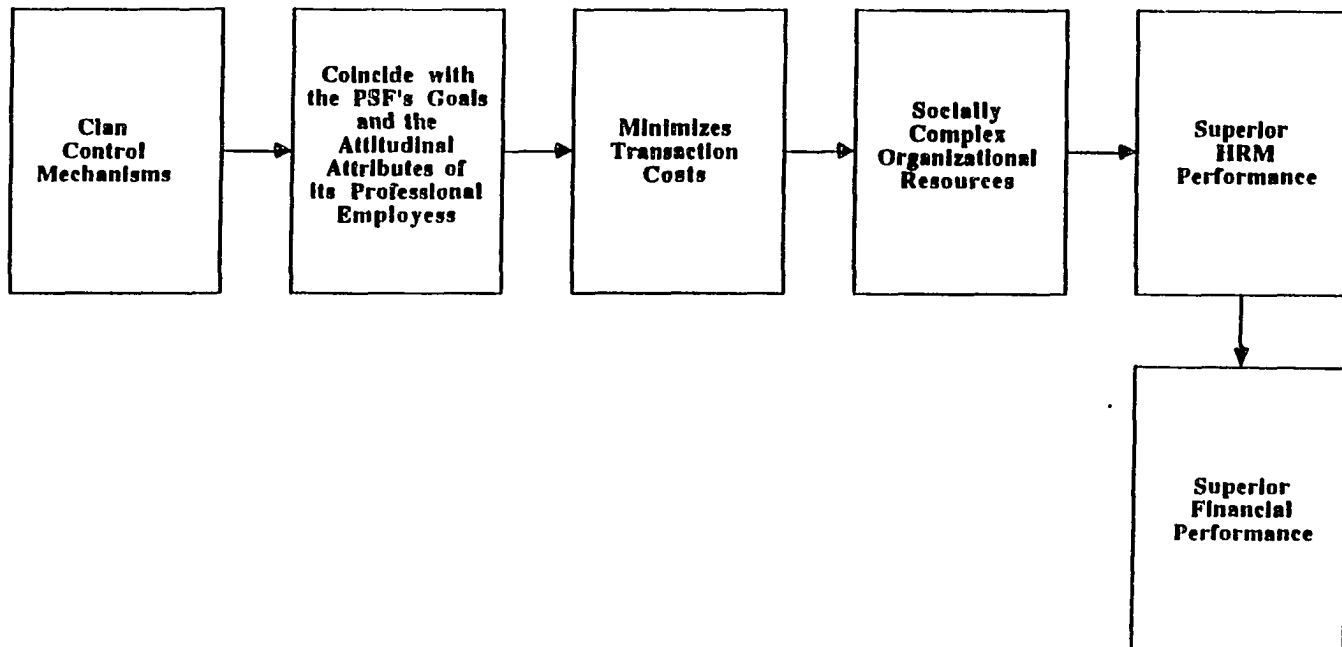


Figure 3.4

INTRAPRENEURIAL CONTROL MECHANISMS

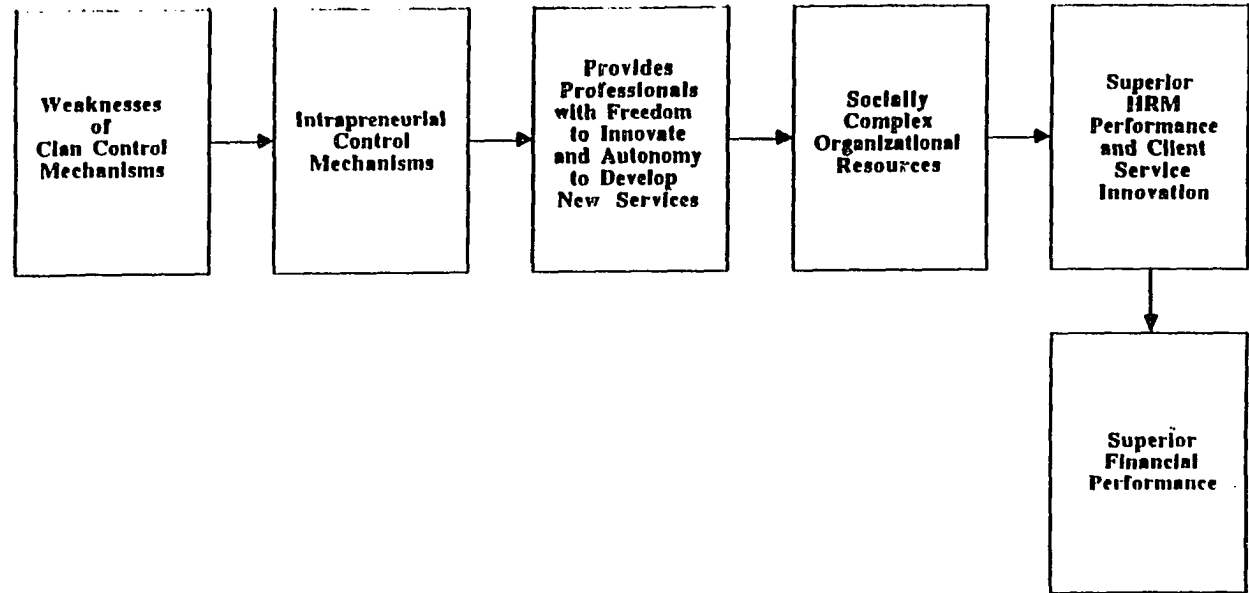
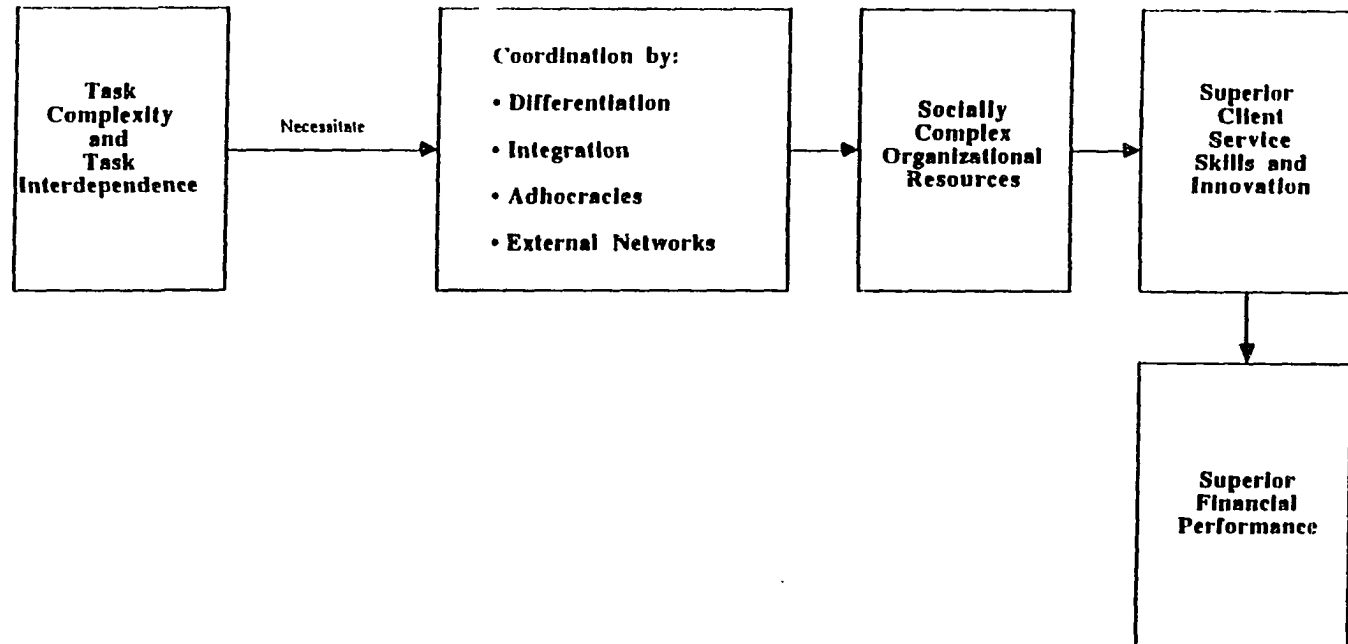


Figure 4.1

COORDINATION MECHANISMS IN PSFs



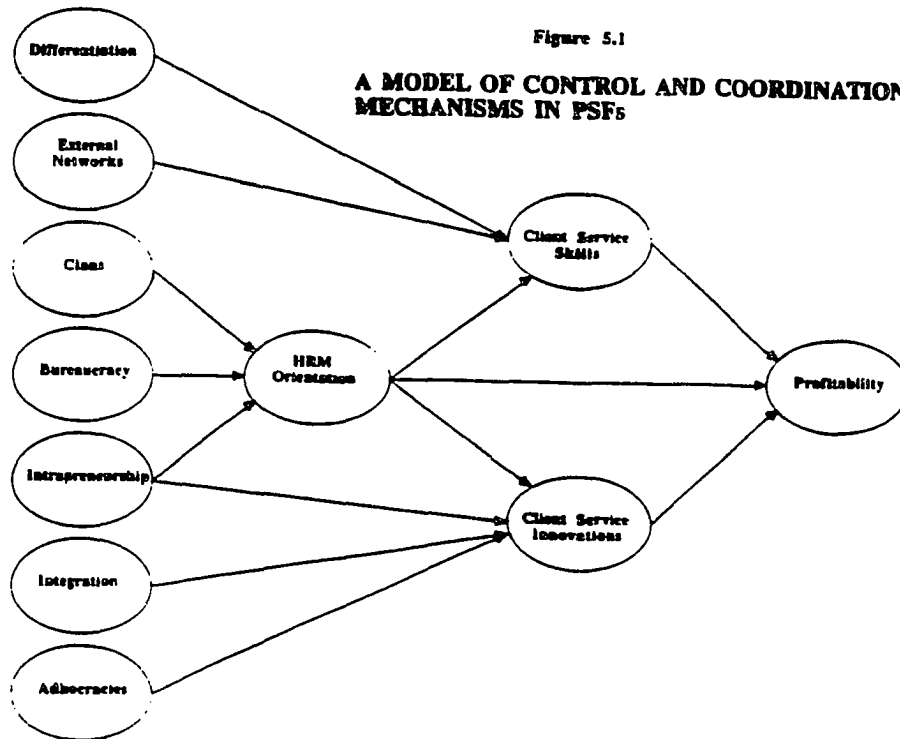
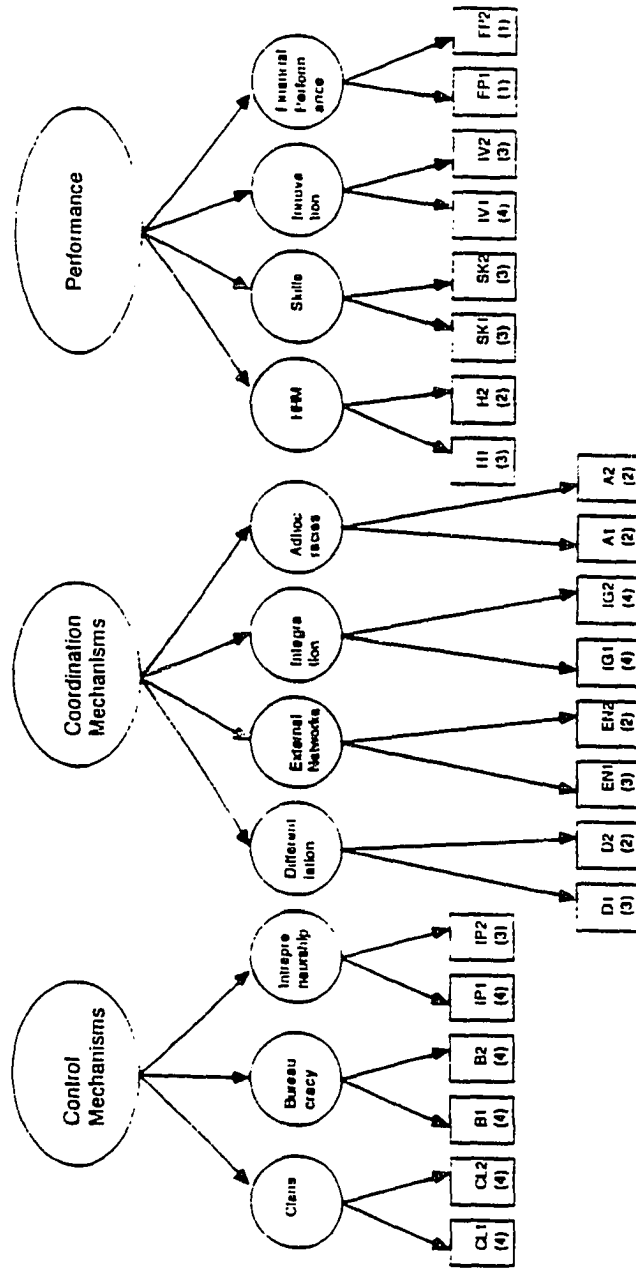


Figure 6.1

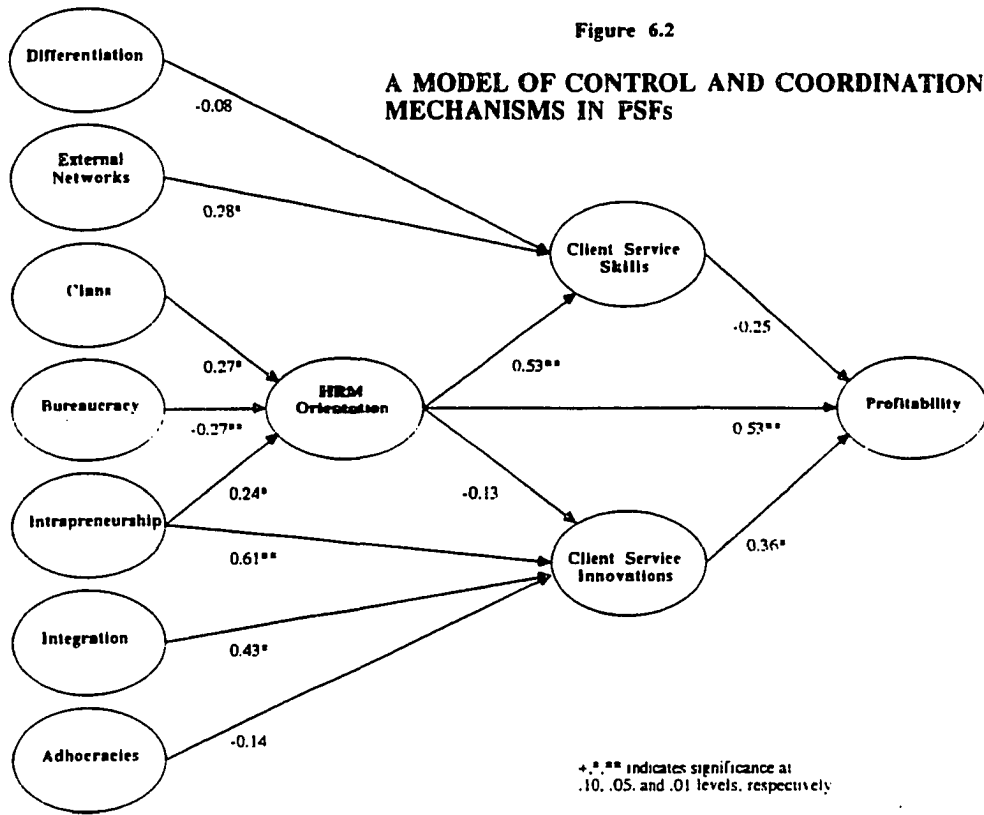
THE PARTIAL DISAGGREGATION MODEL.



Numbers in parentheses denote the number of scale items combined to form a single indicator.

Figure 6.2

A MODEL OF CONTROL AND COORDINATION MECHANISMS IN PSFs



TABLES

Table 5.1

**Functional and Hierarchical Composition
of Respondents in this Study**

<u>Functional Specialty</u>	<u>Percentage of Respondents</u>
Audit	26.5%
Tax	33.4%
Consulting	12.8%
Administrative (e.g. human resource management, managing partner, and marketing)	27.3%
-----	-----
TOTAL	100%

<u>Hierarchical Level</u>	<u>Percentage of Respondents</u>
Staff	3.1%
Seniors	4.8%
Managers	35.2%
Partners	42.3%
Directors (e.g., human resource management or marketing)	14.6%
-----	-----
TOTAL	100%

Table 5.2

**Frequency Distribution of Number of Respondents From
Local Offices of Public Accounting Firm**

<u>No. of Respondents</u>	<u>No. of Local Offices</u>	<u>Percent</u>
1	11	9.8%
2	11	9.8%
3	12	10.7%
4	24	21.4%
5	15	13.4%
6	16	14.3%
7	12	10.7%
8	5	4.5%
9	6	5.4%
-----	-----	-----
TOTAL	112	100%

Table 5.3

Sample Representation of Different Local Office Sizes

Local Office Size	Percentage of Local Offices	Percentage of Respondents
Big Six	23.7%	25%
Large Non-Big Six (70 employees or more)	23.7%	17.9%
Medium (More than 20 employees and less than 70)	29.5%	35.7%
Small (Less than 20 employees)	23.1%	21.4%

Table 5.4

Description of Measures for Control Mechanisms

Construct	Measures	Hypotheses
Bureaucratic Control Mechanisms	Never relinquishing control or authority Always following rules or practice Conforming Avoiding risks Treating rules as more important than ideas Taking few chances Waiting for others to act first Pushing decisions upward	1
Clan Control Mechanisms	Cooperating with others Using good human relations skills Sharing feelings and thoughts Thinking in terms of group satisfaction Involving subordinates in decisions Helping other to grow and develop Resolving conflict constructively Being supportive of others	2
Intrapreneurial Control Mechanisms	Training professionals in new business development Rewarding professionals for creativity and innovation Establishing procedures to solicit and examine employees' ideas for innovation Designating formal champions of ideas Making resources available for experimental projects Increasing the autonomy of different departments to enhance their innovation	3a and 3b

Table 5.5

Description of Measures for Coordination Mechanisms

Construct	Measures	Hypothesis
Differentiation	Differences in departments (audit, consulting, and tax) based on: Clients Fees Charged Strategic Goals Group Structure Work Procedures	4
Integration	Educational seminars Briefing sessions Systems to resolve problems between departments Informal meetings among organizational members Staff rotation between different functions Joint training, planning, and problem-solving	5a
Adhocracies	Expertise and experience as important means of coordination Cross-level teams brought together to tackle clients' problems Use of cross-functional teams Lack of separation between audit, tax, and consulting	5a
External Networks	Frequency of contact with: Industry association members Governmental agencies Professionals who do not work with my firm Clients Faculty or administration of universities	5b

Table 5.6

Description of Performance Measures

Construct	Measures	Hypotheses
Financial Performance	Sales Growth Profitability	1-5
Human Resource Management Performance	Employee satisfaction Quality of human resources Recruiting the best talent Relationship management Human resource development	1, 2, and 3
Client Service Skills	Depth of expertise Quality of service Learning and education Understanding the client's business Using technology to service clients Quantitative analysis	4 and 5b
Client Service Innovation	Being the best at service innovation Broadening services Pursuing new clients Finding new niches in current markets Offering present professional services in new markets Being the first to market with new services Stimulating demand through aggressive advertising and marketing	5a

Table 6.1

Factor Loadings -- Control Mechanisms

FACTOR 1 -- CLAN CONTROL MECHANISMS

(Eigenvalue = 7.91; Percentage of Variance = 33.0%)

<u>Item</u>	<u>Factor Loading</u>
Cooperating with others	.89
Using good human relations skills	.71
Sharing feelings and thoughts	.63
Thinking in terms of group satisfaction	.65
Involving subordinates in decisions	.62
Helping other to grow and develop	.71
Resolving conflict constructively	.49
Being supportive of others	.82

Table 6.1 (continued)
 Factor Loadings -- Control Mechanisms

FACTOR 2 -- BUREAUCRATIC CONTROL MECHANISMS

(Eigenvalue = 3.93; Percentage of Variance = 16.4.%)

<u>Item</u>	<u>Factor Loading</u>
Never relinquishing control or authority	.49
Using the authority of one's position	.46
Always following rules or practices	.62
Conforming	.86
Avoiding risks	.76
Treating rules as more important than ideas	.76
Taking few chances	.75
Waiting for others to act first	.66
Pushing decisions upward	.66

Table 6.1 (continued)

Factor Loadings -- Control Mechanisms

FACTOR 3 -- INTRAPRENEURIAL CONTROL MECHANISMS

(Eigenvalue = 2.34; Percentage of Variance = 9.7.%)

<u>Item</u>	<u>Factor Loading</u>
Training professionals in new business development	.70
Rewarding professionals for creativity and innovation	.77
Establishing procedures to solicit employees' ideas for innovation	.82
Establishing procedures to examine employees' ideas for innovation	.85
Designating formal champions of ideas	.79
Making resources available for experimental projects	.75
Increasing the autonomy of different departments to enhance their innovation	.64

Table 6.2

Factor Loadings -- Coordination Mechanisms

FACTOR 1 -- DIFFERENTIATION

(Eigenvalue = 5.7; Percentage of Variance = 25.0%)

<u>Item</u>	<u>Factor Loading</u>
Differences in departments (audit, consulting, and tax) based on:	
Clients	.86
Fees Charged	.79
Strategic Goals	.86
Group Structure	.82
Work Procedures	.91

FACTOR 2 -- INTEGRATION

(Eigenvalue = 4.3; Percentage of Variance = 18.8%)

<u>Item</u>	<u>Factor Loading</u>
Educational seminars	.55
Briefing sessions	.45
Systems to resolve problems between departments	.77
Informal meetings among organizational members	.60
Staff rotation between different functions	.68
Joint-training	.55
Joint-problem solving	.77
Joint-planning	.72

Table 6.2 (continued)

Factor Loadings -- Coordination Mechanisms

FACTOR 3 - ADHOCRACIES

(Eigenvalue = 1.7; Percentage of Variance = 7.4%)

<u>Item</u>	<u>Factor Loading</u>
Expertise and experience important means of coordination	.85
Cross-level teams brought together to tackle clients' problems	.63
Usage of cross-functional teams	.42
Lack of separation between audit, tax, and consulting	.43

FACTOR 4 -- EXTERNAL NETWORKS

(Eigenvalue = 1.7; Percentage of Variance = 7.4%)

<u>Item</u>	<u>Factor Loading</u>
Frequency of contact with:	
Industry associations members	.71
Governmental agencies	.42
Professionals who not work with my firm	.69
Clients	.57
Faculty or administration of universities	.50

Table 6.3

Factor Loadings -- Performance Measures

FACTOR 1 -- CLIENT SERVICE SKILLS

(Eigenvalue = 6.6; Percentage of Variance = 31.8%)

<u>Item</u>	<u>Factor Loading</u>
Quality of client service	.42
Depth of expertise	.43
Learning and education	.94
Understanding the client's business	.94
Using technology to service clients	.63
Quantitative analysis	.47

FACTOR 2 -- CLIENT SERVICE INNOVATION

(Eigenvalue = 3.4; Percentage of Variance = 16.6%)

<u>Item</u>	<u>Factor Loading</u>
Being the best at service innovation	.62
Broadening services	.78
Pursuing new clients	.76
Finding new niches in current markets	.83
Offering present professional services in new markets	.86
Being the first to market with new services	.84
Stimulating demand through aggressive advertising and marketing	.69

Table 6.3 (continued)

Factor Loadings -- Performance Measures

FACTOR 3 -- HUMAN RESOURCE MANAGEMENT PERFORMANCE

(Eigenvalue = 1.9; Percentage of Variance = 9.2%)

<u>Item</u>	<u>Factor Loading</u>
Employee satisfaction	.84
Quality of human resources	.62
Recruiting the best talent	.77
Relationship management	.79
Human resource development	.85

FACTOR 4 -- FINANCIAL PERFORMANCE

(Eigenvalue = 1.3; Percentage of Variance = 6.6%)

<u>Item</u>	<u>Factor Loading</u>
Sales growth	.57
Profitability	.86

Table 6.4**Descriptive Statistics and Coefficient of Reliability
for Constructs**

Construct	Mean	Standard Deviation	Min.	Max.	Cronbach's Alpha
Bureaucratic Control Mechanisms	2.78	.54	1.25	4.75	.88
Clan Control Mechanisms	4.22	.50	2.63	5.56	.88
Intrapreneurial Control Mechanisms	2.83	.63	1.14	4.71	.81
Differentiation	3.18	1.00	1.00	5.17	.91
Integration	3.37	.56	1.75	5.00	.84
Adhocracies	4.32	.72	2.88	6.48	.74
External Networks	2.66	.43	1.80	4.30	.60
Human Resource Management Performance	4.69	.62	3.13	6.11	.89
Client Service Skills	5.36	.59	3.50	6.63	.81
Client Service Innovation	3.81	.64	2.35	5.50	.87
Financial Performance	4.83	.73	3.00	6.38	.63

Table 6.5⁴⁰

Correlation Matrix for Empirical Constructs

Correlations:	BUR	CLANS	INTRA	DIF	INT	ADHOC
BUR	1.0000	-.4379**	-.2844*	.2358	-.2807*	-.5374**
CLANS	-.4379**	1.0000	.5196**	-.0539	.3014*	.3703**
INTRA	-.2844*	.5196**	1.0000	.2480*	.5432**	.2153
DIF	.2358	-.0539	.2480*	1.0000	-.0887	-.4494**
INT	-.2807*	.3014*	.5432**	-.0887	1.0000	.5140**
ADHOC	-.5374**	.3703**	.2153	-.4494**	.5140**	1.0000
NET	.0976	.0604	.3652**	.1590	.4605**	.1092
HRM	-.3989**	.5121**	.4465**	-.0856	.3089**	.3813**
SKILLS	-.2684*	.2193	.2122	-.0873	.3220**	.3584**
INNV	-.1124	.2841*	.6956**	.1776	.5044**	.2266
PROFIT	-.2845*	.2882*	.3957**	-.0210	.1938	.1598

⁴⁰The codes for the constructs listed in the correlation matrix are: bur=bureaucratic control mechanism; clans=clan control mechanisms; intra=intrapreneurial control mechanisms; dif=differentiation; int=integration; adhoc=adhocracies; net=external networks; hrm=human resource management performance; skills=client service skills; innv=client service innovation; profit=financial performance.

Table 6.5 (Continued)

Correlation Matrix for Empirical Constructs

Correlations:	NET	HRM	SKILLS	INNV	PROFIT
BUR	-.0976	-.3989**	-.2684*	-.1124	-.2845*
CLANS	.0604	.5121**	.2193	.2841*	.2882*
INTRA	.3652**	.4465**	.2122	-.6956**	.3957**
DIF	.1590	-.0856	-.0873	.1776	-.0210
INT	.4605**	.3089**	.3220**	.5044**	.1938
ADHOC	.1092	.3813**	.3584**	.2266	.1598
NET	1.0000	.1056	.1530	.3451**	.0450
HRM	.1056	1.0000	.4367**	.2202	.3598**
SKILLS	.1530	.4367**	1.0000	.2288	.1240
INNV	.3451**	.2202	.2288	1.0000	.3411**
PROFIT	.0450	.3598**	.1240	.3411**	1.0000

Sample size = 113 *p < 0.01, **p < 0.001

Table 6.6

Correlation Matrix as Input for LISREL 8

	PROFIT1	PROFIT2	INNV1	INNV2	SKILLS1	SKILLS2
PROFIT1	1.00					
PROFIT2	0.41	1.00				
INNV1	0.32	0.21	1.00			
INNV2	0.29	0.21	0.68	1.00		
SKILLS1	0.16	-0.03	0.13	0.14	1.00	
SKILLS2	0.11	0.14	0.19	0.32	0.48	1.00
HRM1	0.35	0.21	0.15	0.17	0.27	0.41
HRM2	0.40	0.16	0.23	0.22	0.35	0.47
BUR1	-0.25	-0.17	-0.05	-0.02	-0.27	-0.28
BUR2	-0.21	-0.25	-0.15	-0.16	-0.10	-0.26
CLANS1	0.34	0.01	0.17	0.15	0.17	0.12
CLANS2	0.36	0.14	0.38	0.23	0.25	0.12
INTRA1	0.39	0.19	0.65	0.57	0.15	0.32
INTRA2	0.41	0.20	0.55	0.58	0.03	0.22
ADHOC1	0.14	0.10	0.22	0.07	0.19	0.30
ADHOC2	0.10	0.14	0.24	0.19	0.34	0.28
DIF1	-0.03	-0.05	0.14	0.16	-0.14	-0.04
DIF2	-0.01	0.03	0.17	0.14	-0.06	-0.01
INT1	0.11	0.16	0.44	0.44	0.19	0.30
INT2	0.13	0.15	0.37	0.47	0.09	0.32
NET1	0.04	-0.09	0.18	0.23	0.15	0.15
NET2	0.05	0.17	0.36	0.33	0.03	0.10

Table 6.6 (continued)
 Correlation Matrix as Input for LISREL 8

	HRM1	HRM2	BUR1	BUR2	CLANS1	CLANS2
HRM1	1.00					
HRM2	0.84	1.00				
BUR1	-0.44	-0.39	1.00			
BUR2	-0.34	-0.27	0.74	1.00		
CLANS1	0.43	0.45	-0.34	-0.31	1.00	
CLANS2	0.46	0.48	-0.44	-0.40	0.73	1.00
INTRAI	0.44	0.42	-0.23	-0.30	0.43	0.53
INTRAZ	0.38	0.33	-0.19	-0.25	0.38	0.40
ADHOC1	0.38	0.35	-0.50	-0.50	0.31	0.50
ADHOC2	0.26	0.31	-0.45	-0.35	0.12	0.28
DIF1	-0.08	-0.14	0.32	0.17	-0.03	-0.10
DIF2	0.00	-0.09	0.24	0.11	0.01	-0.05
INT1	0.28	0.22	-0.18	-0.27	0.19	0.30
INT2	0.18	0.16	-0.09	-0.21	0.19	0.13
NET1	0.13	0.00	0.02	-0.13	-0.02	-0.02
NET2	0.16	0.08	-0.02	-0.20	0.09	0.18

Table 6.6 (continued)
Correlation Matrix as Input for LISREL 8

	INTRA1	INTRA2	ADHOC1	ADHOC2	DIF1	DIF2
INTRA1	1.00					
INTRA2	0.70	1.00				
ADHOC1	0.29	0.19	1.00			
ADHOC2	0.15	0.06	0.58	1.00		
DIF1	0.19	0.26	-0.29	-0.54	1.00	
DIF2	0.18	0.26	0.25	-0.42	0.79	1.00
INT1	0.53	0.42	0.49	0.48	-0.14	-0.04
INT2	0.44	0.44	0.09	0.13	0.15	0.30
NET1	0.20	0.30	0.13	0.04	0.05	0.15
NET2	0.32	0.36	0.13	0.03	0.15	0.17
	INT1	INT2	NET1	NET2		
INT1	1.00					
INT2	0.50	1.00				
NET1	0.31	0.35	1.00			
NET2	0.47	0.41	0.38	1.00		

Table 6.6 (continued)
Correlation Matrix as Input for LISREL 8

Correlations:	BUR1	BUR2	CLANS1	CLANS2	INTRAI	INTRAI2
BUR1	1.0000	.7381**	-.3449**	-.4450**	-.2316	-.1862
BUR2	.7381**	1.0000	-.3064**	-.4038**	-.2955*	-.2507*
CLANS1	-.3449**	-.3064**	1.0000	.7336**	.4330**	.3817**
CLANS2	-.4450**	-.4038**	.7336**	1.0000	.5321**	.3981**
INTRAI	-.2316	-.2955*	.4330**	.5321**	1.0000	.6984**
INTRAI2	-.1862	-.2507*	.3817**	.3981**	.6984**	1.0000
ADHOC1	-.4997**	-.4969**	.3064**	.4979**	.2897*	.1932
DIF1	.3181**	.1704	-.0295	-.1000	.1888	.2608*
DIF2	.2384	.1118	.0058	-.0539	.1795	.2637*
ADHOC2	-.4481**	-.3460**	.1187	.2805*	.1469	.0593
INT1	-.1786	-.2742*	.1877	.3040*	.5313**	.4158**
INT2	-.0851	-.2053	.1944	.1260	.4399**	.4415**
NET1	.0218	-.1255	-.0190	-.0183	.1991	.3009*
NET2	-.0158	-.2006	.0913	.1783	.3228**	.3579**
HRM1	-.4364**	-.3404**	.4331**	.4589**	.4359**	.3797**
HRM2	-.3904**	-.2679*	.4474**	.4834**	.4182**	.3293**
INNVI	-.0544	-.1454	.1700	.3786**	.6460**	.5460**
INNVI2	-.0214	-.1596	.1464	.2316	.5657**	.5780**
PROF1	-.2504*	-.2126	.3356**	.3581**	.3877**	.4121**
PROF2	-.1730	-.2519*	.0060	.1359	.1934	.2035

N of cases: 113 2-tailed Signif: * - .01 ** - .001

Table 6.6 (Continued)
Correlation Matrix as Input for LISREL 8

Correlations:	ADHOC1	DIF1	DIF2	ADHOC2	INT1	INT2
BUR1	-.4997**	.3181**	.2384	-.4481**	-.1786	-.0851
BUR2	-.4969**	.1704	.1118	-.3460**	-.2742*	-.2053
CLANS1	.3064**	-.0295	.0058	.1187	.1877	.1944
CLANS2	.4979**	-.1000	-.0539	.2805*	.3040*	.1260
INTR1	.2897*	.1888	.1795	.1469	.5313**	.4399**
INTRA2	.1932	.2608*	.2637*	.0593	.4158**	.4415**
ADHOC1	1.0000	-.2886*	-.2461*	.5804**	.4908**	.0873
DIF1	-.2886*	1.0000	.7944**	-.5450**	-.1445	.1538
DIF2	-.2461*	.7944**	1.0000	-.4214**	-.0401	.3027*
ADHOC2	.5804**	-.5450**	-.4214**	1.0000	.4849**	.1295
INT1	.4908**	-.1445	-.0401	.4849**	1.0000	.5015**
INT2	.0873	.1538	.3027*	.1295	.5015**	1.0000
NET1	.1274	.0510	.1486	.0394	.3146**	.3465**
NET2	.1334	.1543	.1665	.0308	.4661**	.4147**
HRM1	.3823**	-.0802	.0008	.2634*	.2760*	.1826
HRM2	.3459**	-.1369	-.0909	.3146**	.2193	.1568
INNV1	.2233	.1404	.1719	.2360	.4429**	.3742**
INNV2	.0680	.1588	.1442	.1950	.4375**	.4670**
PROF1	.1372	-.0310	-.0139	.1009	.1141	.1348
PROF2	.0963	-.0476	.0254	.1432	.1621	.1531

N of cases: 113 2-tailed Signif: * - .01 ** - .001

Table 6.6 (Continued)
Correlation Matrix as Input for LISREL 8

Correlations:	NET1	NET2	HRM1	HRM2	INNV1	INNV2
BUR1	.0218	-.0158	-.4364**	-.3904**	-.0544	-.0214
BUR2	-.1255	-.2006	-.3404**	-.2679*	-.1454	-.1596
CLANS1	-.0190	.0913	.4331**	.4474**	.1700	.1464
CLANS2	-.0183	.1783	.4589**	.4834**	.3786**	.2316
INTRAL	.1991	.3228**	.4359**	.4182**	.6460**	.5657**
INTRAR2	.3009*	.3579**	.3797**	.3293**	.5460**	.5780**
ADHOC1	.1274	.1334	.3823**	.3459**	.2233	.0680
DIF1	.0510	.1543	-.0802	-.1369	.1404	.1588
DIF2	.1486	.1665	.0008	-.0909	.1719	.1442
ADHOC2	.0394	.0308	.2634*	.3146**	.2360	.1950
INT1	.3146**	.4661**	.2760*	.2193	.4429**	.4375**
INT2	.3465**	.4147**	.1826	.1568	.3742**	.4670**
NET1	1.0000	.3750**	.1264	.0028	.1802	.2286
NET2	.3750**	1.0000	.1614	.0767	.3624**	.3347**
HRM1	.1264	.1614	1.0000	.8413**	.1470	.1698
HRM2	.0028	.0767	.8413**	1.0000	.2341	.2166
INNV1	.1802	.3624**	.1470	.2341	1.0000	.6759**
INNV2	.2286	.3347**	.1698	.2166	.6759**	1.0000
PROF1	.0357	.0497	.3532**	.4001**	.3169**	.2942*
PROF2	-.0852	.1673	.2119	.1596	.2128	.2068

N of cases: 113

2-tailed Signif: * - .01 ** - .001

Table 6.6 (Continued)

Correlation Matrix as Input for LISREL 8

Correlations:	PROF1	PROF2
BUR1	-.2504*	-.1730
BUR2	-.2126	-.2519*
CLANS1	.3356**	.0060
CLANS2	.3581**	.1359
INTRA1	.3877**	.1934
INTRA2	.4121**	.2035
ADHOC1	.1372	.0963
DIF1	-.0310	-.0476
DIF2	-.0139	.0254
ADHOC2	.1009	.1432
INT1	.1141	.1621
INT2	.1348	.1531
NET1	.0357	-.0852
NET2	.0497	.1673
HRM1	.3532**	.2119
HRM2	.4001**	.1596
INN1	.3169**	.2128
N of cases:	113	2-tailed Signif: * - .01 ** - .001

Table 6.7

Correlation Matrix of Latent Variables

	PROFIT	INNV	SKILLS	HRM	BUR	CLANS
PROFIT	1.00					
INNV	0.42	1.00				
SKILLS	0.16	0.30	1.00			
HRM	0.47	0.25	0.58	1.00		
BUR	-0.22	-0.11	-0.29	-0.48	1.00	
CLANS	0.34	0.38	0.34	0.56	-0.49	1.00
INTRA	0.45	0.82	0.39	0.48	-0.27	0.60
ADHOC	0.22	0.27	0.30	0.37	-0.65	0.48
DIF	0.05	0.20	-0.05	-0.06	0.33	-0.10
INT	0.33	0.73	0.43	0.34	-0.23	0.36
NET	0.24	0.65	0.36	0.19	-0.06	0.14

	INTRA	ADHOC	DIF	INT	NET
INTRA	1.00				
ADHOC	0.27	1.00			
DIF	0.24	-0.59	1.00		
INT	0.73	0.70	-0.09	1.00	
NET	0.54	0.20	0.21	0.88	1.00

Table 6.8

The Error Variances and R^2 for Measures of the Partial Disaggregation Model

Measure	Error Variance	R^2
BUR1	0.078	0.92
BUR2	0.41	0.59
CLAN1	0.40	0.60
CLAN2	0.10	0.90
INTRA1	0.18	0.82
INTRA2	0.38	0.62
ADHOC1	0.50	0.50
ADHOC2	0.35	0.65
DIF1	0.047	0.95
DIF2	0.34	0.66
INT1	0.33	0.67
INT2	0.70	0.30
NET1	0.76	0.24
NET2	0.55	0.45
HRM1	0.18	0.82
HRM2	0.14	0.86
INNV1	0.21	0.72
INNV2	0.36	0.64
SKILLS1	0.68	0.32
SKILLS2	0.29	0.71
PROFIT1	0.21	0.79
PROFIT2	0.79	0.21

Table 6.9

The Standardized Path Estimates

Dependent Variable	Paths	Standardized Path Estimates	s.e	Hyp. #
HRM Performance	Bureaucracies --> HRM	-0.27**	0.10	1
HRM Performance	Clans --> HRM	0.27*	0.13	2
HRM Performance	Intrapreneurship --> HRM	0.24*	0.12	3a
Client Service Skills	HRM --> Skills	0.53**	0.14	---
Client Service Skills	Differentiation --> Skills	-0.079	0.10	4
Client Service Skills	External Networks --> Skills	0.28*	0.13	5b
Client Service Innovation	HRM --> Innovation	-0.13	0.10	
Client Service Innovation	Intrapreneurship --> Innovation	0.61**	0.19	3b
Client Service Innovation	Innovation --> Integration	0.43*	0.17	5a
Client Service Innovation	Adhocracies --> Innovation	-0.14	0.12	5a
Financial Performance	HRM --> Financial Performance	0.53**	.19	1, 2, 3
Financial Performance	Client Service Skills --> Financial Performance	-0.25	.16	4, 5b
Financial Performance	Client Service Innovation --> Financial Performance	0.36*	.15	3b, 5a

+ p < 0.10, * p < .05, ** p < .01

Table 6.10

GLOBAL MEASURES OF FIT

Measure	Description	Guideline	Study's Result
Chi-square goodness of fit statistic	Measures the differences between the sample correlation matrix and the fitted correlation matrix.	Small statistic value and a p value greater than or equal to 0.05.	274.43 with 175 degrees of freedom (p=0.00).
Adjusted Goodness of Fit Index (AGFI)	Indicates the relative amount of variances and covariances jointly accounted for by the hypothesized model.	Zero indicates a complete lack of fit and 1 indicates a perfect fit; 0.90 suggests a meaningful model.	0.75
Root mean squared residual (RMR)	Indicates the average of residual variance and covariance.	A value under 0.05 suggests a good fit.	0.070
Comparative Fit Index (CFI)	Compares the fit of a model to a model that assumes all variables are uncorrelated	An index of greater than 0.90.	0.92

Table 7.1

**A RESOURCE-BASED VIEW OF
CONTROL AND COORDINATION MECHANISMS IN PSFs**

	Valuable	Rare	Imitability	Competitive Implication
Bureaucratic Control Mechanisms	No. Conflicts with the attitudinal attributes of professionals	---	---	Competitive Disadvantage
Clan Control Mechanisms and Intrapreneurial Control Mechanism	Yes. Aligned with the attitudinal attributes of professionals and resolves the self-interest dilemma by encouraging professionals to work toward organizational goals.	Yes, because of a combination of personalities, specific historical conditions, organizational skills, and support systems.	Yes, because of tacitness.	Competitive Success
Integrative Coordination Mechanisms and External Networks	Yes, manage task interdependency and task complexity.	Yes, because of a combination of personalities, specific historical conditions, organizational skills, and support systems.	Yes, because of social complexity.	Competitive Success
Differentiation and Adhocracies	Yes, brings together the expertise of professionals.	No, very common.	No, easy to duplicate.	Competitive Parity

APPENDICES

APPENDIX A

Sample Description:

Public Accounting Report's Top 100 Accounting Firms for 1993

Public Accounting Report
The PAR Top 100 for 1993
 America's 100 Largest Public Accounting Firms

Rank by Rev.	Firm/HQ Location	Revenue							Revenue Split (%)			
		FYE.	U.S. Net Revenue (\$mil)	% Chg. vs. Prev. Year	No. of Partners	No. of Prof. Staff	No. of Offs.	No. of SEC Clients	AAA	TAX	MCS	Other
1	Arthur Andersen & Co., SC/Chicago, IL	Aug	2220.1	5.8	1365	10679	60	1806	35	20	45	0
2	Ernst & Young/New York, N.Y.	Sep	2221.0	1.6	1636	12016	106	2460	51	23	26	0
3	Deloitte & Touche/Wilton, Conn.	Jun	1955.0	0.2	1472	10128	116	2028	64	23	23	0
4	KPMG Peat Marwick/New York, N.Y.	Jun	1800.0	-0.7	1494	11997	135	2212	63	27	20	0
5	Coopers & Lybrand/New York, N.Y.	Sep	1657.0	5.9	1251	11255	126	1435	66	18	24	0
6	Pricewaterhouse/New York, N.Y.	Jun	1570.0	7.0	933	8191	109	1948	45	27	28	0
7	Grant Thornton/Chicago, IL	Jul	222.0	7.8	260	1600	29	220	64	82	14	0
8	McGladrey & Pullen/Minneapolis, Minn.	Apr	196.6	4.3	360	1196	60	165	36	35	18	13
9	Kenneth Leventhal & Co./Los Angeles, Calif.	Sep	166.2	3.4	76	602	14	32	62	13	35	0
10	BDO Seidman/New York, N.Y.	Jun	162.3	0.7	235	1066	30	164	69	33	6	0
11	Baird, Kurtz & Dobson/Springfield, Mo.	May	68.5	2.1	112	318	19	14	40	33	18	0
12	Crowe, Chizek & Co./South Bend, Ind.	Mar	68.2	11.0	70	470	6	3	42	21	37	0
13	Clifton, Gunderson & Co./Peoria, Ill.	May	50.3	-2.7	102	392	30	3	63	37	7	3
14	Pierce & Fennell/Southfield, Mich.	Jun	49.7	2.1	63	361	13	0	63	25	12	0
15	Moss Adams/Seattle, Wash.	Dec	47.0	5.8	75	415	17	12	44	42	14	0
16	Altshuler, Melvin and Glaser/Chicago, Ill.	Jun	42.0	5.0	54	340	4	2	60	24	28	0
17	Geo. S. Olive & Co./Indianapolis, Ind.	May	36.1	5.3	68	279	11	17	41	30	20	0
18	Richard A. Egan & Co./New York, N.Y.	Jan	30.2	11.4	42	187	4	2	46	41	35	18
19	Goldstein Gold Kessler & Co./New York, N.Y.	Oct	23.6	1.0	39	220	1	10	45	46	6	0
20	Friedman, Eisenstein, Reamer & Schwartz/Chicago	Dec	25.1	22.3	26	147	3	0	32	18	13	39
21	Larson, Allen, Weishaar & Co./Minneapolis, Minn.	Oct	24.9	-3.1	42	160	6	7	36	31	30	3
22	Checkers, Simon & Roemer/Chicago, Ill.	May	22.4	24.4	30	164	1	0	67	26	17	0
23	David Berdon & Co./New York, N.Y.	Dec	22.0	10.0	24	175	1	5	50	30	5	15
24	Wipfler Ulrich Bertelson/Wausau, Wis.	Sep	21.0	3.1	41	166	14	6	47	30	6	17
25	Cherry, Bekert & Holland/Richmond, Va.	Apr	21.0	-5.7	47	165	22	7	66	31	11	0
26	Campos & Strits/Leacock, N.J.	Dec	20.9	4.6	31	117	26	0	0	0	7	93
27	Thomas Hovey & Co./Chicago, Ill.	Dec	19.5	8.3	27	171	7	0	60	20	20	0
28	J.H. Cohn & Co./Roseland, N.J.	Jan	19.4E	-3.5	33	123	4	8	45	40	4	11
29	Parente, Randolph, Orlando, Carey & Assoc./Wilkes-Barre, Pa.	Oct	19.2	1.1	23	171	10	5	62	24	14	0
30	Reznick, Fedder & Silverman/Bethesda, Md.	Sep	19.1	9.8	22	127	3	4	65	30	15	0
31	Urbech, Kahn & Werlin/Albany, N.Y.	Oct	18.1	-5.2	30	124	9	6	69	29	2	0
32	Margolin, Winer & Evers/Garden City, N.Y.	Dec	16.0	1.1	21	125	1	0	n/a	n/a	n/a	n/a
33	M.R. Weiser & Co./New York, N.Y.	Dec	17.2	0.6	19	122	2	0	46	32	5	17
34	Virchow Krause & Co./Madison, Wis.	May	15.8	5.3	29	125	15	0	63	35	10	2
35	Schenck & Assoc./Appleton, Wis.	Sep	15.1	9.6	21	170	5	0	45	35	20	0
36	Heusser & Taylor/Cleveland, Ohio	Dec	15.1	4.1	24	94	4	4	46	36	16	0
37	Mitchell/Titus & Co./New York, N.Y.	Dec	14.0	21.7	16	147	3	0	75	5	20	0
38	Weber, Lipsitz & Co./New York, N.Y.	Mar	13.6E	-4.5	27	79	4	2	67	10	3	0
39	Charles Bailey & Co./Fargo, N.D.	May	13.5	-1.4	33	137	6	2	58	30	14	0
40	Kemper CPA Group/Robinson, Ill.	Apr	13.2	0.0	37	74	25	0	42	39	19	0
41	Dizon, Odum & Co./High Point, N.C.	May	13.1	9.4	22	63	10	0	54	31	6	9
42	Mahoney Cohen & Co./New York, N.Y.	Mar	13.1	12.9	16	62	1	1	69	31	0	0
43	Folmer, Rutzewicz & Co./Southfield, Mich.	May	13.0	6.6	10	130	2	0	39	25	36	0
44	Eide Helms & Co./Fargo, N.D.	Dec	12.9	8.4	29	112	8	3	44	35	10	11
45	Kennedy and Coe/Salina, Kan.	Mar	12.8	-7.0	25	81	17	0	16	64	15	5
46	Blackman Kallick Bartolstein/Chicago, Ill.	Dec	12.7	-0.3	11	121	1	1	46	35	19	0
47	Rubin, Brown, Gornstein & Co./St. Louis, Mo.	May	12.3	1.2	16	126	1	3	60	36	7	7
48	Rehmann Robson & Co./Saginaw, Mich.	Dec	12.2	1.8	19	98	6	3	46	33	8	11
49	Matson, Driscoll & Demico/Chicago, Ill.	Dec	12.0E	14.3	23	83	12	0	0	0	1	99

Source: PAR's Annual Survey of Top Accounting Firms; PAR research and analysis. Revenue data for most recent fiscal year available. Where firms declined to provide data, PAR made estimates, denoted by "E" in revenue column. "Tie" denotes shared ranking based on equal revenue. Where revenue appears equal only due to rounding, separate rankings were assigned. Percentages in revenue split may not equal 100 due to rounding. N/A = Not available.

**Public Accounting Report
The PAR Top 100 for 1993
America's 100 Largest Public Accounting Firms**

Rank by Rank	Firm/HQ Location	Revenue				No. of Partners	No. of Prof. Staff	No. of Offs.	No. of SEC Clients	Revenue Split (%)			
		FYE	U.S. Net Revenue (\$ml)	% Chg. vs. prev. Year						AAA	TAX	MCS	Other
50	Meyer Hoffman McCann/Kansas City, Mo.	Dec	11.8	4.4	16	106	2	5	30	30	10	30	
Tie	Edward Jasso & Co./New York, N.Y.	Sep	11.6	-4.6	21	84	1	0	60	30	10	0	
52	LeMaster & Daniels/Spokane, Wash.	May	11.7	2.9	20	118	9	0	54	42	4	0	
53	Rothstein, Kass & Co./Roseland, N.J.	Dec	11.7	15.8	10	81	1	6	74	20	3	3	
Tie	Tofias, Fleishman, Shapiro & Co./Cambridge, Mass.	Oct	11.7	6.4	19	82	1	0	57	13	2	28	
55	Anchin, Block & Anchin/New York, N.Y.	Sep	11.5E	4.5	23	99	1	6	70	25	5	0	
56	Joseph Decosimo and Co./Chattanooga, Tenn.	Dec	11.1E	1.8	16	100	5	0	44	36	18	0	
57	Lopez, Edwards, Frank & Co./Valley Stream, N.Y.	Jun	11.0	1.9	15	100	2	0	60	30	10	0	
58	Suby, Von Haden & Assoc./Madison, Wis.	May	10.6	2.1	15	48	2	0	40	21	21	18	
59	Wolpoff & Co./Baltimore, Md.	Sep	10.6	11.3	9	82	2	0	49	31	20	0	
60	Aronson, Fetridge, Weigle & Schimmel/Rockville, Md.	May	10.7E	3.9	14	61	1	2	67	29	4	0	
61	Mauldin & Jenkins/Albany, Ga.	Jun	10.5	0.0	17	54	3	3	55	42	3	0	
62	Goodman & Co./Norfolk, Va.	Jun	10.5	0.0	17	54	3	3	55	42	3	0	
63	Hill, Barth & King/Youngstown, Ohio	Aug	10.5E	2.7	20	75	12	2	60	26	14	0	
64	Zelenkofska Axelrod & Co./Jenkintown, Pa.	Sep	10.4	22.4	15	115	7	4	9	25	9	57	
65	Elliott, Davis & Co./Greenville, S.C.	Jun	10.2	14.5	19	101	5	2	44	49	7	0	
66	Clark, Schaefer, Hackart & Co./Middletown, Ohio	Jun	10.2	3.0	21	80	5	2	46	43	11	0	
Tie	Katz, Sapper & Miller/Indianapolis, Ind.	Dec	10.2	13.3	13	78	1	2	34	44	22	0	
68	C.W. Amos & Co./Baltimore, Md.	Jun	10.1E	-1.9	17	86	5	0	38	29	33	0	
69	Lurie, Belakof, Lapidus & Co./Minneapolis, Minn.	Apr	10.0	4.2	13	89	1	4	55	39	6	0	
70	Habit, Aropeti & Wynne/Atlanta, Ga.	Aug	9.8	7.7	19	90	1	0	48	40	5	7	
Tie	Amper, Politzner & Martis/Edison, N.J.	Mar	9.8	1.0	9	61	3	2	75	20	5	0	
72	Phillip Rootberg & Co./Chicago, Ill.	Sep	9.7	10.2	13	61	1	1	55	39	6	0	
Tie	Keller Bruner & Co./Frederick, Md.	Dec	9.7	2.1	18	75	3	3	62	25	11	2	
74	Blum, Shapiro & Co./West Hartford, Conn.	Dec	9.5	3.5	18	75	1	0	47	38	9	6	
75	Katoury, Armstrong & Co./Reno, Nev.	Dec	9.5	7.5	21	60	8	0	36	35	17	12	
76	Hecht and Co./New York, N.Y.	Dec	9.4	4.4	5	52	3	0	55	45	0	0	
77	Blue & Co./Indianapolis, Ind.	Jun	9.4	4.4	14	91	5	2	50	34	16	0	
78	Hemming Morse/San Mateo, Calif.	Dec	9.1	-9.9	11	58	3	0	3	27	4	66	
79	Hood & Strong/San Francisco, Calif.	Sep	8.9	-1.4	20	73	2	0	44	43	2	11	
80	Wintee & McCaughy/Long Beach, Calif.	Jun	8.9	-1.1	13	45	1	0	38	48	3	11	
81	Ostrow Reisin Berk & Abrams/Chicago, Ill.	May	8.4	10.1	14	62	3	0	50	43	7	0	
82	S.R. Snodgrass/Watford, Pa.	Dec	8.4	11.1	14	84	7	7	51	35	9	5	
83	Walpert, Smulian & Blumenthal/Baltimore, Md.	Oct	8.4	-6.8	12	64	1	0	51	35	14	0	
84	Kerber Eck & Breckel/Springfield, Ill.	Apr	8.3	3.8	20	104	6	5	55	24	10	11	
85	Madden & Moore/Cleveland, Ohio	Sep	8.3	-1.2	12	75	5	0	33	30	10	27	
86	Wolf & Co./Oakbrook, Ill.	Dec	8.2	3.8	15	75	1	0	40	30	10	20	
87	Buchbinder Tunick & Co./New York, N.Y.	Oct	8.1E	-13.4	13	51	4	0	66	24	10	0	
Tie	Morseman & Assoc./Cranford, N.J.	Oct	8.1E	1.3	14	47	1	25	75	15	10	0	
Tie	Doeren Mayhew & Co./Troy, Mich.	Sep	8.1E	8.0	15	37	1	1	55	20	25	0	
90	Pisenti & Brinker/Santa Rosa, Calif.	Dec	8.1	3.7	14	60	3	0	29	59	9	3	
91	Wise & Co./Livingston, N.J.	Mar	8.0	0.0	13	65	1	19	50	35	15	0	
Tie	Macias & Miranda/Sacramento, Calif.	Dec	8.0	0.0	4	86	4	5	40	15	45	0	
93	Berry, Dunn, McNeil & Parker/Portland, Maine	Jun	7.9E	4.9	20	78	2	1	51	36	13	0	
94	Irseloff, Tretner & Co./Valley Stream, N.Y.	Dec	7.9	-9.0	12	46	1	2	55	40	3	2	
95	Irseloff, San Filippo & Co./Palo Alto, Calif.	Apr	7.8	-6.9	13	64	6	0	63	30	7	0	
96	Kallogg & Anderson/West Hollywood, Calif.	Apr	7.7	1.7	9	44	1	4	36	41	5	18	
97	Whitrum, Smith & Brown/Princeton, N.J.	Jun	7.6	3.5	10	60	6	4	52	25	23	0	
98	Weaver and Tidwell/Fort Worth, Texas	Dec	7.6	-2.0	13	51	2	4	47	43	5	5	
99	Mills, Houser & Co./Topeka, Kan.	Dec	7.5	4.2	8	45	3	2	30	20	35	15	
Tie	Yergen and Meyer/Portland, Ore.	Dec	7.5	-1.3	17	51	8	0	41	43	16	0	

Source: PAR's Annual Survey of Top Accounting Firms. PAR research and analysis. Revenue data for most recent fiscal year available. Where firms declined to provide data, PAR made estimates, denoted by *E* in revenue column. Tie* denotes shared ranking based on equal revenue. Where revenue appears equal only due to rounding, separate rankings were assigned. Percentages in revenue split may not equal 100 due to rounding. N/A = Not available.

August 31, 1993

APPENDIX B

Correspondence for Soliciting Survey Participation



THE UNIVERSITY OF MICHIGAN
SCHOOL OF BUSINESS ADMINISTRATION
701 TAPPAN STREET
ANN ARBOR, MICHIGAN 48109-1234

October 7, 1993

Dear Director of Human Resources:

The corporate strategy department at the University of Michigan's Business School is about to undertake a study that examines the strategic human resource management practices of the local offices of accounting firms. Through the collection of survey data, this study will look at a wide array of managerial issues that accounting firms confront in today's competitive environment. We believe that professional service firms, such as yours, are archetypes for firms in an economy driven by services, information, and knowledge. Hence, we are interested in studying the managerial practices of accounting firms and applying our findings to other industries.

Each accounting firm that participates in the study will receive a copy of the study's findings. This report will include a comprehensive and individual analysis of your firm's management practices, as well as a comparison of your firm with its competitors. All data will be kept confidential and reported to ensure anonymity. The data collected will only be used for research purposes. The Business School at the University of Michigan is committed to furthering the advancement of managerial research and its executive education program was rated number one by *Business Week*. Enclosed is a copy of an article that discusses the Business School.

For each firm that participates in the study, we would like general background information before mailing the questionnaires. Enclose is an information sheet. Please fill it out and mail it back to me in the pre-addressed stamped envelope.

Thank you in advance, for agreeing to help me out. I think that the results of this study will prove to be quite interesting to your firm. Please do not hesitate to call me at (313) 973-7148 if you have any questions.

Sincerely,

Lynn Maria Perry
Project Director

**INFORMATION SHEET FOR THE STRATEGIC MANAGEMENT OF ACCOUNTING FIRMS
STUDY**

Firm's Name _____

Firm's Mailing Address _____

Firm's Telephone Number _____

Contact Person (This person will be responsible for distributing the questionnaires and the study's findings will be mailed to this person.)

Contact Person's Position or Title _____

Number of Employees _____

Number of Local Offices _____

For research purposes, we ask for nine respondents in each local offices to fill out a questionnaire. Please provide us with the names of each respondent that will fill out the questionnaire.

TITLE OR POSITION	NAME
Managing Partner	
Auditing Partner	
Tax Partner	
Consulting Partner	
Auditing Manager	
Tax Manager	
Consulting Manager	
Director of Human Resources	
Director of Marketing	

Thank you for your time and consideration. Please mail the completed information sheet in the envelope provided.

**INFORMATION SHEET FOR THE
STRATEGIC MANAGEMENT OF ACCOUNTING FIRMS STUDY**

Firm's Name: Arthur Andersen

Firm's Mailing Address _____

Firm's Telephone Number _____

Name of Person filling out the information sheet _____

Title of Person filling out the information sheet _____

For research purposes, we ask that nine questionnaires be distributed in each local offices listed below. Please provide a contact person in each local office that will distribute the questionnaires. We will also mail a copy of the study's findings to this contact person.

OFFICE	CONTACT PERSON	TITLE
Atlanta, Georgia		
Boston, Massachusetts		
Chicago, Illinois		
Cleveland, Ohio		
Dallas, Texas		
Denver, Colorado		
Detroit, Michigan		
Houston, Texas		
Los Angeles, California		
Minneapolis, Minnesota		
New York, New York		
Philadelphia, Pennsylvania		
San Francisco, California		
Seattle, Washington		
Washington, DC		

Thank you for your time and consideration. Please mail the completed information sheet in the envelope provided.

APPENDIX C

Pretest Instrument, Correspondence, and Feedback Form



THE UNIVERSITY OF MICHIGAN
SCHOOL OF BUSINESS ADMINISTRATION

701 TAPPAN STREET
ANN ARBOR, MICHIGAN 48109-1234

November 19, 1993

Dear Fellow Wolverine:

I am a doctoral candidate in the corporate strategy department at the University of Michigan Business School. My dissertation examines the strategic management practices of large accounting firms. Through the collection of survey data from over 1,000 professionals, I will look at a wide array of managerial issues that accounting firms confront in today's competitive environment.

As part of my dissertation research, I must pretest the validity of my questionnaire before mailing it. It would be greatly appreciated if you could fill out the enclosed questionnaire. When answering questions, please refer to your past work experiences in an accounting firm. Please be assured that all responses will be kept confidential and reported in a manner that insures anonymity. In addition, I would like your feedback on the questionnaire and this package includes a form to provide feedback.

After you complete the questionnaire, please put it in the self-addressed envelope and place it in the mailroom (The mailroom on the second floor in the business school) in the mailbox marked Ph.D. Forum. The sooner the better for your responses, but I definitely need them before Tuesday, November 30th.

Thank you in advance, for agreeing to help me out. I think that the results of this study will prove to be quite interesting, and you may be able to incorporate some of the study's findings into your corporate strategy or organizational behavior course work. Please do not hesitate to call me at (313) 973-7148 if you have any questions.

Sincerely,

Lynn Perry

SURVEY

For the National Study of
Accounting Firms Strategic Management Practices



This survey requests information about your firm and its management practices. Please respond to all applicable questions. When responding please refer to **YOUR LOCAL OFFICE** rather than to the entire firm. Also, please keep in mind that your responses will be kept strictly **CONFIDENTIAL**. Thank you for your help.

C O N F I D E N T I A L

If you have any questions, please feel free to contact: Lynn Perry at (313) 973-7148.

Please return questionnaire in the pre-addressed stamped envelope to:



Lynn Perry
Ph.D. Forum, Room B2259
Graduate School of Business Administration
The University of Michigan
701 Tappan Street
Ann Arbor, Michigan 48109-1234

SECTION B: ORGANIZATIONAL STRUCTURE

In this section, we ask questions about the organizational structure of the local office of your accounting firm. Please use the scale below to assess the extent to which you agree or disagree with each item. Write the number that best fits your answer in the space at the left of each item.

- | | |
|---------------------------|------------------------|
| 1. VERY STRONGLY DISAGREE | 5. AGREE |
| 2. STRONGLY DISAGREE | 6. STRONGLY AGREE |
| 3. DISAGREE | 7. VERY STRONGLY AGREE |
| 4. NEITHER | |

- ___1. In this office, there is a clear division of labor based on functional specialization.
- ___2. This office has open channels of communication with important financial and operating information flowing quite freely throughout the firm.
- ___3. In this office, there is a well defined hierarchy of authority.
- ___4. There is a formal system of rules covering the rights and duties of professionals in this office.
- ___5. Relationships in this firm are not interpersonal or informal.
- ___6. We place a strong emphasis on adapting freely to changing circumstances without much concern for past practices.
- ___7. There is a formal system of procedures for dealing with work situations while professionals are at the client.
- ___8. The functional or hierarchial grouping of professionals is not important. Instead professionals are assigned to the client based on their talents.
- ___9. Often this firms combines temporary teams of professionals from different offices to solve the clients problems.
- ___10. Professionals in this firm are equals, and one's status is less importance than his or her expertise or experience.
- ___11. Often staff accountants, managers, and partners get together to tackle the clients' problems.
- ___12. Frequently, new services are created in a combined effort by professionals from the auditing, tax, and consulting groups.
- ___13. The separation between auditing, tax, and consulting is irrelevant, and only used for housekeeping and administrative purposes.

SECTION C: ORGANIZATIONAL CULTURE

The following statements describe types of operating values which may exist in the local office. None of the descriptions are any better than the others; they are just different. Please use the scale below to assess the extent to which you agree or disagree with each item. Write the number that best fits your answer in the space at the left of each item.

- | | |
|---------------------------|------------------------|
| 1. VERY STRONGLY DISAGREE | 5. AGREE |
| 2. STRONGLY DISAGREE | 6. STRONGLY AGREE |
| 3. DISAGREE | 7. VERY STRONGLY AGREE |
| 4. NEITHER | |

- ___ 1. This firm is a very personal place. It is like an extended family. People seem to share a lot of themselves.
- ___ 2. This firm is very dynamic and entrepreneurial place. People are willing to stick their necks out and take risks.
- ___ 3. This firm is a very formalized and structured place. People pay attention to procedures to get things done.
- ___ 4. This firm is a very production oriented place. People are concerned with getting the job done.
- ___ 5. The glue that holds my firm together is loyalty and tradition. Commitment runs high.
- ___ 6. The glue that holds my firm together is commitment to innovation and development. There is an emphasis on being first with products and services.
- ___ 7. The glue that holds my firm together is formal rules and policies. Following rules is important.
- ___ 8. The glue that holds my firm together is an emphasis on tasks and goal accomplishment.
- ___ 9. This firm emphasizes human resources. Morale is important.
- ___ 10. This firm emphasizes growth through new ideas. Generating new services is important.
- ___ 11. This firm emphasizes permanence and stability. Efficiency is important.
- ___ 12. This firm emphasizes outcomes and achievement. Accomplishing goals is important.

SECTION D: ORGANIZATIONAL NETWORKS

Please think about how often you are in contact with the following professionals to discuss any work-related matters. These contacts can be formal or informal. Use the scale below to assess your frequency of contact with other professionals.

- | | |
|----------------------------|---------------------------|
| 1. NEVER | 4. TO SOME EXTENT |
| 2. TO A VERY LITTLE EXTENT | 5. TO A LARGE EXTENT |
| 3. TO A LITTLE EXTENT | 6. TO A VERY LARGE EXTENT |

- ___1. Industry or trade associations.
- ___2. Government agencies.
- ___3. Other professionals who work in this office, but belong to other functional groups.
- ___4. Professionals who work for my firm, but not in the same office.
- ___5. Other professionals who work in this industry or the same discipline, but who do not work for this firm.
- ___6. People who belong to the same not-for-profit organizations as I do.
- ___7. Partners in this office.
- ___8. Managers in this office.
- ___9. Staff assistants or seniors in this office.
- ___10. The support staff in this office.
- ___11. Clients, but not in the context of fee-paid auditing, tax, or consulting engagements.
12. In the last year, how many industry and trade associations meetings did you attend?
___0 to 5 ___6 to 10 ___11 to 15 ___More Than 15
13. In the last year, how many not-for-profit organizational meetings did you attend?
___0 to 5 ___6 to 10 ___11 to 15 ___More Than 15

SECTION E: INTRA-ORGANIZATIONAL COMMUNICATION

Please think about how often your office utilizes the following communication mechanisms. Use the scale below to assess your frequency of contact with other professionals.

- | | |
|----------------------------|---------------------------|
| 1. NEVER | 4. TO SOME EXTENT |
| 2. TO A VERY LITTLE EXTENT | 5. TO A LARGE EXTENT |
| 3. TO A LITTLE EXTENT | 6. TO A VERY LARGE EXTENT |

- ___1. Company newsletters or in-house journals.
- ___2. Computerized databases that include the skills of each professionals.
- ___3. Electronic mail systems or computerized bulletin boards.
- ___4. Educational seminars.
- ___5. Transfer of organizational members to different offices within the firm.
- ___6. Informal meetings among organizational members.
- ___7. Systems that encourage cooperation between departments.
- ___8. Briefing sessions.
- ___9. Rotation of staff into different jobs or functions.
- ___10. Joint-training across functions.
- ___11. Rewards for collaboration across departments.
- ___12. Different departments plan together and coordinate their efforts.
- ___14. Systems exist that effectively resolve problems between departments.
- ___15. Major policy speeches or statements by top leadership.

SECTION F: DEPARTMENTAL DIFFERENTIATION

This section is designed to assess how the management practices of other functional groups or departments differ from your own department. Please indicate the number which most closely represents the differences in management practices.

1. THERE IS NO DIFFERENCE 2. THERE IS VERY LITTLE DIFFERENCE 3. THERE IS A LITTLE DIFFERENCE	4. THE DIFFERENCE IS MODERATE 5. THE DIFFERENCE IS GREAT 6. THE DIFFERENCE IS VERY GREAT
--	--

- ___ 1. The organizational structure of other departments in this office.
- ___ 2. The clientele base of other functions in this office.
- ___ 3. The interpersonal relationship between professionals in other departments.
- ___ 4. The type of work professionals in other departments perform.
- ___ 5. The strategic goals of the other departments in this office.

SECTION G: MARKET STRATEGY

In new service introduction, how often is the local office of your accounting firm:

	NEVER		SOMETIMES			ALWAYS	
First-to-market with new services	1	2	3	4	5	6	7
Early followers of initial entrants in fast-growing new markets	1	2	3	4	5	6	7
Later entrants in established but still growing markets	1	2	3	4	5	6	7
Entrants in mature, stable markets	1	2	3	4	5	6	7
Entrants in declining markets	1	2	3	4	5	6	7
At the cutting edge of service innovation	1	2	3	4	5	6	7

SECTION H: HUMAN RESOURCE MANAGEMENT PRACTICES

Please use the scale below to assess the extent which your accounting firm engages in the following human resource management practices. Write the number that best fits your answer in the space at the left of each item.

- | | | | |
|----|-------------------------|----|------------------------|
| 1. | NOT AT ALL | 5. | TO A LARGE EXTENT |
| 2. | TO A VERY LITTLE EXTENT | 6. | TO A VERY LARGE EXTENT |
| 3. | TO A LITTLE EXTENT | | |
| 4. | TO SOME EXTENT | | |

- ___ 1. This firm offers flexible (cafeteria-style) employee benefits.
- ___ 2. This firm offers child care benefits or dependent care benefits.
- ___ 3. This firm offers job outplacement services when employees leave the firm.
- ___ 4. This firm provides in-house training for its professionals.
- ___ 5. This firm recruits professionals who have worked for the firm in the past.
- ___ 6. There is a wellness program (e.g. smoking cessation programs) or employee assistance programs (counseling services).
- ___ 7. There is a system to reimburse you for educational expenses (e.g., CPA preparation classes or an evening MBA program).
- ___ 8. Managers and partners are assessed by subordinates.
- ___ 9. This firm surveys employees to get their feedback on managerial policies.
- ___ 10. Professionals are rewarded bonuses for obtaining individual goals.
- ___ 11. There is a mentoring program in this firm.
- ___ 12. There are specialized training programs and career paths for high achievers.
- ___ 14. Groups or departments are rewarded for high productivity.
- ___ 15. The firm brings in outside specialists or consultants for training.
- ___ 16. There is a flexibility in this firm for "alternative career styles" (e.g. working mothers).

SECTION H: MARKETING PRACTICES

Please use the scale below to assess the extent to which this office engages in the following marketing practices. Write the number that best fits your answer in the space at the left of each item.

- | | |
|----------------------------|---------------------------|
| 1. NOT AT ALL | 5. TO A LARGE EXTENT |
| 2. TO A VERY LITTLE EXTENT | 6. TO A VERY LARGE EXTENT |
| 3. TO A LITTLE EXTENT | |
| 4. TO SOME EXTENT | |

- ___ 1. We focus on building long-term relationships with our clients.
- ___ 2. We share resources with other offices in this accounting firm.
- ___ 3. There is a system to identify clients' needs.
- ___ 4. Professionals in this office share competitor information.
- ___ 5. We target opportunities for competitive advantage.
- ___ 6. We typically follow-up our engagement with a telephone call to the client.
- ___ 7. Market information is shared across functions.
- ___ 8. We respond rapidly to competitors' actions.
- ___ 9. All functions contribute to customer service.
- ___ 10. We obtain measures of customer satisfaction from our clients.
- ___ 11. We take an inter-functional approach to customer service.
- ___ 12. We have established clear customer satisfaction objectives.
- ___ 13. All functions contribute to the formation of marketing strategy.
- ___ 14. Partners discuss competitive strategies with professionals.
- ___ 15. We obtain customer input prior to designing our services.
- ___ 16. This firm has a system that allows us to benchmark our services and performance against our competitors.
- ___ 17. This firm's marketing strategy includes a plan to target clients in other countries.
- ___ 18. This firm offers educational programs to our clients.

SECTION H: PERFORMANCE INFORMATION

Given the current stage of development of your office and its competitive markets, please assess your office's performance in the following areas by circling your response on the scale below.

	LOW PERFORMER			MODERATE PERFORMER			HIGH PERFORMER
Technical Service Skills	1	2	3	4	5	6	7
Innovative Services	1	2	3	4	5	6	7
Sales Growth	1	2	3	4	5	6	7
Quality of Client Service	1	2	3	4	5	6	7
Market Share	1	2	3	4	5	6	7
Profitability and Return on Billings	1	2	3	4	5	6	7
Employee Satisfaction	1	2	3	4	5	6	7
Community Service	1	2	3	4	5	6	7

SECTION I: DEMOGRAPHIC INFORMATION

It would be most appreciated if you would respond to the items below. The information you provide will be used to identify trends across groups in your accounting firm (and to support our ongoing research effort). Your responses will be treated with the strictest confidentiality.

<u>AGE</u>	<u>SALARY (Annual)</u>	<u>EDUCATION</u>
<input type="checkbox"/> 1. Under 25	<input type="checkbox"/> 1. Under \$25,000	<input type="checkbox"/> 1. Some College
<input type="checkbox"/> 2. 25-35	<input type="checkbox"/> 2. \$25,001 to \$50,000	<input type="checkbox"/> 2. College Degree
<input type="checkbox"/> 3. 35-45	<input type="checkbox"/> 3. \$50,001 to \$75,000	<input type="checkbox"/> 3. Some Graduate Work
<input type="checkbox"/> 4. 45-55	<input type="checkbox"/> 4. \$75,001 to \$100,000	<input type="checkbox"/> 4. Graduate Degree
<input type="checkbox"/> 5. 55 or older	<input type="checkbox"/> 5. \$100,001 to \$200,000	
	<input type="checkbox"/> 6. Above \$200,00	
<u>SEX</u>	<u>YEARS WITH THE FIRM</u>	
<input type="checkbox"/> 1. Female	<input type="checkbox"/> 1. Less than one year	
<input type="checkbox"/> 2. Male	<input type="checkbox"/> 2. 1 year to 4 years	
	<input type="checkbox"/> 3. 4 to 8 years	
	<input type="checkbox"/> 4. 8 to 12 years	
	<input type="checkbox"/> 5. 12 to 20 years	
	<input type="checkbox"/> 6. more than 20 years	

THANK YOU FOR YOUR TIME AND CONSIDERATION. IF THERE IS ANYTHING ELSE YOU WOULD LIKE TO TELL US ABOUT THE MANAGEMENT PRACTICES OF YOUR FIRM THAT MAY HELP OUR RESEARCH, PLEASE DO SO ON THE BACK OF THIS BOOKLET.

PRETEST FEEDBACK FORM
FOR THE NATIONAL STUDY OF
ACCOUNTING FIRMS' STRATEGIC MANAGEMENT PRACTICES

Firm's Name _____

Office Location _____

How long did it take you to fill out the questionnaire? _____

What questions did you find interesting? _____

Why did you find these questions interesting?

What questions did you find difficult to understand?

Why did you find these questions difficult to understand?

Do you think any of the questions are inappropriate?

Thank you for your time and cooperation. If you have any additional comments that may help us in future efforts to understand the strategic management practices of accounting firms, please write them on the back of this sheet.

APPENDIX D

Cover Letter, Final Questionnaire, and Follow-up Mailing



THE UNIVERSITY OF MICHIGAN
SCHOOL OF BUSINESS ADMINISTRATION

701 TAPPAN STREET
ANN ARBOR, MICHIGAN 48106-1224

March 25, 1994

Dear Firm Member:

You have been selected to participate in a project sponsored by The University of Michigan Business School in conjunction with the Association of Accounting Administrators. This research project examines the strategic human resource management practices of the local offices of public accounting firms. Through the collection of survey data from over 1,000 professionals, this study will look at a wide array of managerial issues that accounting firms confront in today's competitive environment.

As a participant in this study, we would like you to fill out the enclosed questionnaire. After you complete the questionnaire, please mail it to me in the pre-addressed stamped envelope. Please be assured that all responses will be kept confidential and reported in a way that insures anonymity.

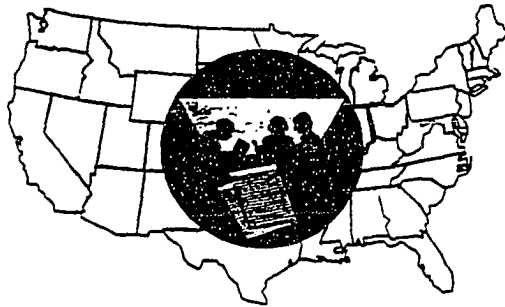
Thank you, in advance, for agreeing to help me out. I realize this is a busy time of the year. However, the questionnaire should take only fifteen minutes to complete, and I think that the results of this study will prove to be quite interesting to you and your firm. Please do not hesitate to call me at (313) 973-7148 if you have any questions.

Sincerely,

Lynn Perry Wooten
Research Project Director

SURVEY

For the National Study of
Accounting Firms Strategic Management Practices



This survey requests information about your firm and its management practices. Please respond to all applicable questions. When responding please refer to YOUR LOCAL OFFICE rather than to the entire firm. Also, please keep in mind that your responses will be kept strictly CONFIDENTIAL. Thank you for your help.

C O N F I D E N T I A L

If you have any questions, please feel free to contact: Lynn Perry Wooten at (313) 973-7148.

Please return questionnaire in the pre-addressed stamped envelope to:



Lynn Perry Wooten
Ph.D. Forum, Room B2259
Graduate School of Business Administration
The University of Michigan
701 Tappan Street
Ann Arbor, Michigan 48109-1234

Firm Name: _____

Office Location: _____

On average, how many hours a week do you work? _____

SECTION A: GENERAL MANAGEMENT PRACTICES

This section pertains to the management practices of the local office of your accounting firm. Please use the scale below to assess the extent to which you agree or disagree with each statement. Write the number that best describes your answer in the space at the left of each item.

1. VERY STRONGLY DISAGREE	5. AGREE
2. STRONGLY DISAGREE	6. STRONGLY AGREE
3. DISAGREE	7. VERY STRONGLY AGREE
4. NEITHER	

- ___ 1a. Decisions are made in this office by consensus, involving professionals from many departments.
- ___ 2a. In this office, failure is something to be avoided at all cost.
- ___ 3a. In this office, creative ideas come from people working alone.
- ___ 4a. Before an organizational member makes a decision which effects this office, they often ask my opinion.
- ___ 5a. There is no need for supervision in this office. Junior staff members can work effectively without supervision.
- ___ 6a. This office has it own philosophy of management. That is, it tries to follow a unique or special style of management that differentiates it from other accounting firms.
- ___ 7a. Professionals are encouraged to experiment in this office so as to identify new and more innovative approaches to services.
- ___ 8a. This office encourages employees to socialize together during non-work hours.
- ___ 9a. This firm's culture places emphasis on trust and shared values.
- ___ 10a. There is little difference between the firm's goals and my personal goals.
- ___ 11a. Most professionals in this office are treated pretty much the same regardless of rank or status.
- ___ 12a. Professionals with unpopular views are given a fair hearing in this office.

SECTION C: LOCAL OFFICE STRUCTURE

In this section, we ask questions about the organizational structure of the local office of your accounting firm. Please use the scale below to assess the extent to which you agree or disagree with each item. Write the number that best fits your answer in the space at the left of each item.

1. VERY STRONGLY DISAGREE	5. AGREE
2. STRONGLY DISAGREE	6. STRONGLY AGREE
3. DISAGREE	7. VERY STRONGLY AGREE
4. NEITHER	

- ___ 1c. The functional or hierarchial grouping of professionals is not important. Instead, professionals are assigned to the client based on their talents.
- ___ 2c. Often this firm combines temporary teams of professionals from different offices to solve the client's problems.
- ___ 3c. Professionals in this firm are equals, and one's status is less important than his or her expertise or experience.
- ___ 4c. Often staff accountants, managers, and partners get together to tackle the client's problems.
- ___ 5c. Frequently, new services are created in a combined effort by professionals from the auditing, tax, and consulting groups.
- ___ 6c. The separation between auditing, tax, and consulting is irrelevant, and only used for housekeeping and administrative purposes.

SECTION D: ORGANIZATIONAL POLICIES

Please circle the point on each scale that **best** describes the organizational policies in your office. For example, if your office places a much greater emphasis on stability than creativity you may circle "1" for the third scale.

- | | | |
|---|---------------|---|
| The rules in this office are dictated by organizational hierarchy. | 1 2 3 4 5 6 7 | The work procedures in this office are influenced by professional associations. |
| Authority in this office comes from one's title or rank. | 1 2 3 4 5 6 7 | Authority in this office is based on personal competence. |
| Emphasis is on stability. | 1 2 3 4 5 6 7 | Emphasis is on creativity. |
| Problems are solved in a uniform manner. | 1 2 3 4 5 6 7 | Problems are handled individually in a unique manner. |
| Professionals in this office are loyal to the organization. | 1 2 3 4 5 6 7 | Professionals in this office are committed to their clients. |
| Rules are stated as specifics. | 1 2 3 4 5 6 7 | Rules are stated as alternatives. |
| There are formal procedures for dealing with work situations while professionals are with the client. | 1 2 3 4 5 6 7 | Work situations at the client are flexible and driven by satisfying the client's needs. |

SECTION E: NETWORKS

Please think about how often you are in contact with the following professionals to discuss any work-related matters. These contacts can be formal or informal. Use the scale below to assess your frequency of contact with other professionals.

- | | |
|----------------------------|---------------------------|
| 1. NEVER | 4. TO A MODERATE EXTENT |
| 2. TO A VERY LITTLE EXTENT | 5. TO A LARGE EXTENT |
| 3. TO SOME EXTENT | 6. TO A VERY LARGE EXTENT |

- ___ 1e. Industry or trade associations (e.g., AICPA).
- ___ 2e. Government agencies (e.g., IRS, SEC).
- ___ 3e. Other professionals who work in this office, but belong to other functional groups.
- ___ 4e. Professionals who work for my firm, but not in the same office.
- ___ 5e. Other professionals who work in this industry or the same discipline, but who do not work for this firm.
- ___ 6e. People who belong to the same not-for-profit organizations as I do.
- ___ 7e. Partners in this office.
- ___ 8e. Managers in this office.
- ___ 9e. Staff assistants or seniors in this office.
- ___ 10e. The support staff in this office.
- ___ 11e. Clients, but not in the context of fee-paid auditing, tax, or consulting engagements.
- ___ 12e. Faculty or administration of universities.
- 13e. In the last year, approximately how many industry and trade association meetings did you attend? _____
- 14e. In the last year, approximately how many not-for-profit organizational meetings did you attend? _____

SECTION F: WITHIN-OFFICE COMMUNICATION

Please think about how often your office utilizes the following communication mechanisms. Use the scale below to assess the extent your office utilizes the following communication mechanisms.

- | | |
|----------------------------|---------------------------|
| 1. NEVER | 4. TO A MODERATE EXTENT |
| 2. TO A VERY LITTLE EXTENT | 5. TO A LARGE EXTENT |
| 3. TO SOME EXTENT | 6. TO A VERY LARGE EXTENT |

- ___ 1f. Company newsletters or in-house journals.
- ___ 2f. Computerized databases that list the skills of each professional.
- ___ 3f. Electronic mail systems or computerized bulletin boards.
- ___ 4f. Educational seminars.
- ___ 5f. Transfer of organizational members to different offices within the firm.
- ___ 6f. Informal meetings among organizational members.
- ___ 7f. Systems that encourage cooperation between departments.
- ___ 8f. Briefing sessions.
- ___ 9f. Rotation of staff into different jobs or functions.
- ___ 10f. Joint-training across functions.
- ___ 11f. Rewards for collaboration across departments.
- ___ 12f. Different departments plan together and coordinate their efforts.
- ___ 13f. Systems exist that effectively resolve problems between departments.
- ___ 14f. Major policy speeches or statements by top leadership.

SECTION G: DEPARTMENTAL WORK PRACTICES

In this section, we ask questions about the differences in work practices of departments (e.g., audit, consulting, tax) in your office. Please use the scale below to assess the differences. Write the number that best fits your answer in the space at the left of each item. For instance, if the audit department and the consulting department do not share any of the same clients you might mark "6" for question number one.

- | | |
|--|-------------------------------------|
| 1. THERE IS NO DIFFERENCE/NOT APPLICABLE | 4. THERE IS A MODERATE DIFFERENCE |
| 2. THERE IS A VERY LITTLE DIFFERENCE | 5. THERE IS GREAT DIFFERENCE |
| 3. THERE IS SOME DIFFERENCE | 6. THERE IS A VERY GREAT DIFFERENCE |

- ___ 1g. The clients of the **audit** department in comparison to the clients of the **consulting** department.
- ___ 2g. The clients of the **tax** department in comparison to the clients of the **consulting** department.
- ___ 3g. The clients of the **tax** department in comparison to the clients of the **audit** department.
- ___ 4g. The **fees charged** to **audit** clients in comparison to **consulting** clients.
- ___ 5g. The **fees charged** to **tax** clients in comparison to **consulting** clients.
- ___ 6g. The **fees charged** to **tax** clients in comparison to **audit** clients.
- ___ 7g. The **strategic goals** of the **audit** department in comparison to the **consulting** department.
- ___ 8g. The **strategic goals** of the **tax** department in comparison to the **consulting** department.
- ___ 9g. The **strategic goals** of the **tax** department in comparison to the **audit** department.
- ___ 10g. The **group structure** (reporting relationships) of the **audit** department in comparison to the **consulting** department.
- ___ 11g. The **group structure** (reporting relationships) of the **tax** department in comparison to the **consulting** department.
- ___ 12g. The **group structure** (reporting relationships) of the **tax** department in comparison to the **audit** department.
- ___ 13g. The **work procedures** of the **audit** department in comparison to the **consulting** department.
- ___ 14g. The **work procedures** of the **tax** department in comparison to the **consulting** department.
- ___ 15g. The **work procedures** of the **tax** department in comparison to the **audit** department.

SECTION H: INNOVATION STRATEGY

Please use the scale below to assess the extent to which your local office emphasizes the following aspects of its innovation strategy. Write the number that best fits your answer in the space at the left of each item.

- | | | | |
|----|-------------------------|----|------------------------|
| 1. | NOT AT ALL | 4. | TO A MODERATE EXTENT |
| 2. | TO A VERY LITTLE EXTENT | 5. | TO A LARGE EXTENT |
| 3. | TO SOME EXTENT | 6. | TO A VERY LARGE EXTENT |

- ___ 1h. Stimulating new demand for existing services through aggressive advertising and marketing.
- ___ 2h. Broadening your professional services in new areas that are related to your current business.
- ___ 3h. Pursuing new clients.
- ___ 4h. Finding new niches for your services in your current markets.
- ___ 5h. Entering new markets by offering new professional services.
- ___ 6h. Being the first to market with new services.
- ___ 7h. Being the very best at service innovation.
- ___ 8h. Training professionals in new business development.
- ___ 9h. Rewarding professionals for creativity and innovation.
- ___ 10h. Establishing procedures to solicit employees' ideas for innovation.
- ___ 11h. Establishing procedures to examine new innovation ideas.
- ___ 12h. Designating formal "champions" of ideas.
- ___ 13h. Making resources available for experimental projects.
- ___ 14h. Increasing the autonomy (independence) of different departments (e.g., audit, consulting, tax) to enhance their innovation.

Indicate the extent of changes that have taken place in your office over the past three years by circling your response on the scale below.

	Decreased Significantly		No Significant Change		Increased Significantly
Emphasis on developing new services	1	2	3	4	5
Rate of new service introduction into the market	1	2	3	4	5
Spending on new business development	1	2	3	4	5
Number of new services added by your office	1	2	3	4	5

SECTION I: HUMAN RESOURCE MANAGEMENT PRACTICES

Please use the scale below to assess the extent to which your local office engages in the following human resource management practices. Write the number that best fits your answer in the space at the left of each item.

- | | |
|----------------------------|---------------------------|
| 1. NOT AT ALL | 4. TO A MODERATE EXTENT |
| 2. TO A VERY LITTLE EXTENT | 5. TO A LARGE EXTENT |
| 3. TO SOME EXTENT | 6. TO A VERY LARGE EXTENT |

- ___ 1i. This office offers flexible (cafeteria-style) employee benefits.
- ___ 2i. This office offers child care benefits or dependent care benefits.
- ___ 3i. This office offers job out-placement services when employees leave the firm.
- ___ 4i. This office provides in-house training for its professionals.
- ___ 5i. This office recruits professionals who have worked for the firm in the past.
- ___ 6i. There is a Wellness Program (e.g., smoking cessation programs) or Employee Assistance Programs (counseling services).
- ___ 7i. There is a system to reimburse you for educational expenses (e.g., CPA preparation classes or an evening MBA program).
- ___ 8i. Managers and partners are assessed by subordinates.
- ___ 9i. This office surveys employees to get their feedback on managerial policies.
- ___ 10i. Professionals are rewarded bonuses for obtaining individual goals.
- ___ 11i. There is a mentoring program in this office.
- ___ 12i. There are specialized training programs and career paths for high achievers.
- ___ 13i. Groups or departments are rewarded for high productivity.
- ___ 14i. The office brings in outside specialists or consultants for training.
- ___ 15i. There is a flexibility in this office for "alternative career styles" (e.g., working mothers).

SECTION J: MARKETING PRACTICES

Please use the scale below to assess the extent to which your local office engages in the following marketing practices. Write the number that best fits your answer in the space at the left of each item.

- | | | | |
|----|-------------------------|----|------------------------|
| 1. | NOT AT ALL | 4. | TO A MODERATE EXTENT |
| 2. | TO A VERY LITTLE EXTENT | 5. | TO A LARGE EXTENT |
| 3. | TO SOME EXTENT | 6. | TO A VERY LARGE EXTENT |

- ___1j. We focus on building long-term relationships with our clients.
- ___2j. We share resources with other offices in this accounting firm.
- ___3j. There is a system to identify clients' needs.
- ___4j. Professionals in this office share competitor information.
- ___5j. We target opportunities for competitive advantage.
- ___6j. We typically follow-up our engagement with a telephone call to the client.
- ___7j. Market information is shared across functions.
- ___8j. We respond rapidly to competitors' actions.
- ___9j. All functions contribute to customer service.
- ___10j. We obtain measures of customer satisfaction from our clients.
- ___11j. We take an inter-functional approach to customer service.
- ___12j. We have established clear customer satisfaction objectives.
- ___13j. All functions contribute to the formation of marketing strategy.
- ___14j. Partners discuss competitive strategies with professionals.
- ___15j. We obtain customer input prior to designing our services.
- ___16j. This office has a system that allows us to benchmark our services and performance against our competitors.
- ___17j. This office's marketing strategy includes a plan to target clients in other countries.
- ___18j. This office offers educational programs to our clients.

SECTION K: PERFORMANCE INFORMATION

Given the current stage of development of your office and its competitive markets, please assess your office's performance in the following areas by circling your response on the scale below.

	LOW PERFORMER			MODERATE PERFORMER		HIGH PERFORMER	
Sales Growth	1	2	3	4	5	6	7
Quality of Client Service	1	2	3	4	5	6	7
Profitability	1	2	3	4	5	6	7
Employee Satisfaction	1	2	3	4	5	6	7
Depth of Expertise	1	2	3	4	5	6	7
Efficiency of Operations	1	2	3	4	5	6	7
Quality of Human Resources	1	2	3	4	5	6	7
Responses to Market Changes	1	2	3	4	5	6	7
Development of New Services	1	2	3	4	5	6	7
Recruiting the Best Talent	1	2	3	4	5	6	7
Retaining the Best Talent	1	2	3	4	5	6	7
Quality of Management	1	2	3	4	5	6	7
Maintenance of Professional Standards	1	2	3	4	5	6	7
Relationship Management	1	2	3	4	5	6	7
Human Resource Development	1	2	3	4	5	6	7
Using Technology to Service Clients	1	2	3	4	5	6	7
Learning and Education	1	2	3	4	5	6	7
Understanding Clients' Business Processes	1	2	3	4	5	6	7
Quantitative Analysis	1	2	3	4	5	6	7
International Perspective	1	2	3	4	5	6	7

SECTION L: DEMOGRAPHIC INFORMATION

It would be most appreciated if you would respond to the items below. The information you provide will be used to identify trends across groups in your accounting firm (and to support our ongoing research effort). Your responses will be treated with the strictest confidentiality.

<p><u>AGE</u></p> <p>___ 1. Under 25</p> <p>___ 2. 25-35</p> <p>___ 3. 36-45</p> <p>___ 4. 46-55</p> <p>___ 5. 56 or older</p> <p><u>SEX</u></p> <p>___ 1. Female</p> <p>___ 2. Male</p>	<p><u>SALARY (Annual)</u></p> <p>___ 1. Under \$25,000</p> <p>___ 2. \$25,001 to \$50,000</p> <p>___ 3. \$50,001 to \$75,000</p> <p>___ 4. \$75,001 to \$100,000</p> <p>___ 5. \$100,001 to \$200,000</p> <p>___ 6. Above \$200,000</p>	<p><u>EDUCATION</u></p> <p>Please indicate the school and major for all degrees earned:</p> <p>AA/AS _____</p> <p>BA/BS _____</p> <p>MA/MS _____</p> <p>MBA _____</p> <p>LLM _____</p> <p>JD _____</p> <p>PhD _____</p> <p>Other _____</p>
<p><u>POSITION</u></p> <p>___ 1. Staff</p> <p>___ 2. In-charge /Senior</p> <p>___ 3. Manager</p> <p>___ 4. Partner</p> <p>___ 5. Other; Please Explain</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p><u>YEARS WITH THE FIRM</u></p> <p>___ 1. Less than one year</p> <p>___ 2. 1 year to 4 years</p> <p>___ 3. 4 to 8 years</p> <p>___ 4. 8 to 12 years</p> <p>___ 5. 12 to 20 years</p> <p>___ 6. more than 20 years</p>	<p><u>WORK DUTIES</u></p> <p>What percentage of your work time is devoted to the following activities?</p> <p>Auditing Services _____</p> <p>Tax Services _____</p> <p>Management Advisory Services _____</p> <p>Bookkeeping Services _____</p> <p>General Administration _____</p> <p>Other(Generating New Business, Training, etc.) _____</p>

THANK YOU FOR YOUR TIME AND CONSIDERATION.

In the winter, I sent you an information booklet and surveys for you to distribute to firm members. These questionnaires seek to learn more about your accounting firm's strategic management practices. If your firm members have already completed and returned the surveys and information booklet, please accept our sincere thanks. If not, please do so today. It is extremely important that the surveys from your firm be included in the study if the results are to accurately represent successful management practices of accounting firms. By any chance if you did not receive the mailing, or it got misplaced, please call me right now at (313) 973-7148, and I will mail you another one.

*Sincerely,
Lynn Perry Wooten
Project Director*

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