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THE IMPACT OF STRATEGIC HUMAN RESOURCE MANAGEMENT ON
ORGANIZATIONAL PERFORMANCE: A PERSPECTIVE OF THE RESOURCE-
BASED VIEW OF THE FIRM

By

Lorenzo J. Hester

A DISSERTATION

Submitted to
Nova Southeastern University
H. Wayne Huizenga School of Business and Entrepreneurship

in partial fulfillment of the requirements
for the degree of

DOCTOR OF BUSINESS ADMINISTRATION MANAGEMENT

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By

Lorenzo J. Hester

We hereby certify that this Dissertation submitted by Lorenzo J. Hester conforms to acceptable standards, and as such is fully adequate in scope and quality. It is therefore approved as the fulfillment of the Dissertation requirements for the Degree of Doctor of Business Administration.

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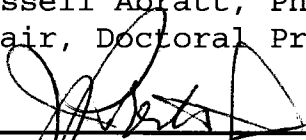
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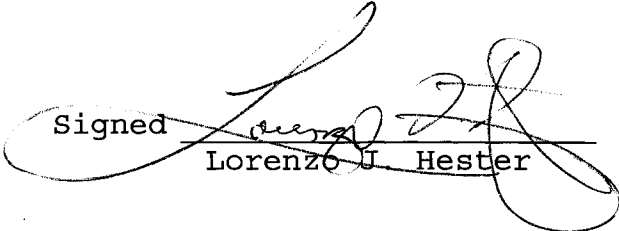
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ABSTRACT

THE IMPACT OF STRATEGIC HUMAN RESOURCE MANAGEMENT ON ORGANIZATIONAL PERFORMANCE: A RESOURCE-BASED VIEW OF THE FIRM PERSPECTIVE

by

Lorenzo Hester

Nonprofit organizations (NPOs) employ more than 11 million people. These employees work for organizations in a sector that touches the lives of most Americans. Moreover, this sector has increased significantly over the past 60 years from a little more than 12,000 organizations in 1950 to over 1.6 million organizations today (Lampkin & Boris, 2002). As these organizations become larger they begin to look and behave more like for-profit businesses. This rapid rise in the number of nonprofit organizations has increased competition within the sector, both in terms of long-term financial stability and human capital. While NPOs are structured along different motivating and operational dimensions than for-profit organizations, in many instances they both compete in the same environment for human capital. An important dimension to achieving and maintaining a competitive advantage is the integration of human resources with the business strategy.

This study examines the extent to which strategic human resource management (SHRM) practices can impact perceptual organizational performance by direct means, through improvement of specific human capital skills and behaviors (motivation). Most previous studies that contributed to the understanding of SHRM issues were based on large, established for-profit organizations. The present study departs from the previous SHRM literature in two ways. First, data were collected using a mail survey to 401 randomly selected NPOs. The survey had a response rate of 21% with 84 fully completed questionnaires.

Second, a structural equation model (SEM) was constructed and tested to determine the effects of SHRM practices on retaining and training human capital, and the impact on performance. According to the literature, firms vary in performance particularly because they differ in human capital.

Based on the review of the literature, four independent variables were used in the model. The dependent variables used to test the model were employees' intent to leave, perceived organizational performance, and human capital. The results were used to test seven hypotheses. The data served to expand the notion that SHRM is a valuable asset and may affect organizational performance. Optimizing training activities and minimizing employees' intent to leave the organization appeared to be good predictors of organizational performance.

Future research avenues proposed included longitudinal studies to assess how these complex relationships converse over time and to examine whether organizational performance is indeed significantly increased through the mediating mechanism of decreasing the employees' desire to leave the organization.

ACKNOWLEDGEMENTS

As with any journey, there are people and moments that come along and makes an indelible impression on our minds, and perhaps will forever be close and dear to our hearts. Such is the case with my journey to complete this dissertation.

Through the grace of God, I was fortunate to have Dr. Linda Howard as my chair. Her constant support, determination, academic excellence, high standards and values, good humor, and friendship made it possible for me to complete this journey.

My committee members were invaluable in producing a good research product. Dr. Dastoor, whom I met early in my program provided a stabilization force, refuge during some turbulent times, and valuable insight. I shall never forget her encouraging talks during lunch at the Chinese restaurant in Little Rock, AR. Special thanks to Dr. Paul Dion, a giant among scholars, who open my eyes to the unseen relationships that existed in the data.

The completion of this dissertation is an example for my children Kertrina, David, Christian, and Lauren to know that goals in life that are deemed valuable and noteworthy require three ingredients: some sacrifice, perseverance, and lots of hard work. While your dreams and journeys in life may indeed be of different hue than a dissertation, these key ingredients are common for success.

To my wife, Maria, who especially deserves a special thanks for her patience, devotion, support, and encouragement that she gave me during this journey. As always, she is the wind beneath my wings. Any measure of success I obtain in this journey of life, I owe in part because of her strong and endearing love.

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CHAPTER I

INTRODUCTION

"One ailment that antibiotics will never stamp out is premature formation of opinions."

Anonymous

Background of the Problem

Increasing proportions of the U.S. workforce have been attracted to employment in nonprofit organizations (NPOs). Surprisingly, the size of the nonprofit sector has increased significantly over the past 60 years from a little more than 12,000 organizations in 1950 to over 1.6 million organizations today in the United States. NPOs now employ more than 11 million people (Lampkin & Boris, 2002). These employees work for organizations in a sector that touches the lives of most Americans in many ways daily. Historically, these organizations have attracted intrinsically motivated employees. However, due to the rapid rise in the number of NPOs, these organizations have begun to compete amongst themselves, as well as with organizations in the for-profit sector, for human capital. Therefore, it is important to understand how strategic human resource management (SHRM) practices contribute to organizational performance at NPOs.

Nonprofit Organizations

This sector includes 501(c)(3) public-serving nonprofits, which are mainly concerned with the spiritual, educational, social, medical, legal, cultural, and leisure-time needs of citizens. The popular view in the past was that persons were attracted to this sector held the ideals of selfless service and fulfilling work and have chose to avoid the competitiveness of for-profit firms and the impersonality of government bureaucracy (Marvis & Hackett, 1983).

A large number of NPOs are formed for one of two reasons: to produce a certain level of quality service when it is less than perfectly observed by the consumer, or to produce goods or services while abiding by certain moral, intellectual, aesthetic, or religious principles (Leete, 2000). While the sector has grown quickly, serious questions have arisen in recent years about the funding and management of these organizations, particularly in the wake of terrorist attacks of September 11, 2001. In response to contributor's concerns following a series of highly publicized financial scandals at nationally prominent charities, the field of nonprofit management has quietly undergone a period of self-examination (Frumkin & Kim, 2001).

Historical Background

Previous studies of nonprofit firms have focused on the extent to which nonprofit decision-makers act inefficiently in response to their profit-distribution constraint and the non-transferability of claims to organization benefits (Feigenbaum, 1987; Frumkin & Kim, 2001). Leete (2000) examined the relationship between wage equity and employee motivation in NPOs. Surprisingly, scant consideration has been given to the impact of competition within this sector on human capital. The relationship between nonprofit market conditions and firm performance has been ignored, due largely to the lack of a theoretical link between nonprofit market structure and firm behavior. To date, very few authors have examined the implications of strategic human resource practices for managing human capital in NPOs; in other words, few studies have examined how SHRM could be used to attract and retain and continue to motivate intrinsically motivated employees.

As they get larger, NPOs begin to look and behave more and more like for-profit businesses. For the most part, the NPOs of the past sought no profits and paid low or no wages, simply because of their espoused idealistic views. Today, however, there is a new class of NPOs, and their survival depends upon the interaction between institutional structure and other features of the environment such as entrepreneurial motivation, private donations, government policies, and the overall

competitive environment.

The rapid rise in the number of nonprofits seeking a piece of the limited amount of charitable contributions has increased competition within the sector and made it harder for many of these organizations to achieve long-term financial stability (Frumkin & Kim, 2001). Further, in term of the amounts of funds they manage and the numbers of staff they employ, these neophytes rival most medium-sized corporations. Most of these organizations are professionally managed and marketed. According to the Organization for Economic Cooperation and Development (OECD), in 2000, non-profit groups provided 11 million or eight percent of all jobs in America (Anonymous, 2000). Several authors (Leete, 2000; Reiss, 1989; Rose-Ackerman, 1996) have suggested that under such conditions, the organizational goals of nonprofits are often best achieved by attracting intrinsically motivated employees and by hiring employees who identify very closely with the goals of the organization.

Many researchers have recognized that NPOs are structured along different motivating and operational dimensions than for-profit organizations. Leete (2000) reported that differences between nonprofit and for-profit organizations extend, to varying degrees, to their reasons for existence, their organizational goals and methods, the products they produce, and the constituencies they serve. Leete further argued that NPOs

rely disproportionately on intrinsically motivated employees. Indeed, NPOs provide a particularly interesting context for examining some of these issues.

In this current research, the assertion is made and argued that such differences may well lead to different approaches to human resource management (HRM), in particular with regard to attracting, retaining, and motivating workers. The discussion presented in this study is grounded in the resource-based view (RBV) of the firm on competition, which argues that organizations with a productive workforce are likely to have attributes that contribute to competitive advantage. Superior workforce productivity can be difficult to imitate, cannot be easily replicated, may draw upon idiosyncratic routines and know-how, may be uniquely valuable in a given firm setting, and may add unique value to new strategic factors (Barney, 1991; Dierickx & Cool, 1989; Perteraf, 1993). For these reasons, the assertion is made that a central objective of the HRM function of a firm is to enhance the firm's competitive position by creating high levels of 'human capital' resources.

Decision Making Unit

As Gelade and Ivery (2003) pointed out, the performance of an organization is determined by the productivity and efficiency of such higher level organizational entities as departments,

retail outlets, plants, or teams. In the language of operations research, these productivity entities are called "decision-making units" (DMUs). Furthermore, Gelade and Ivery (2003) reported, these units can be compared to each other when they consume the same types of resources and produce the same types of output. Examples of DMUs within an organization are branches of a bank, stores in a retail chain, and chapters, affiliates, or charters in a large humanitarian association.

There is evidence in the literature that strategic human resource practices affect organizational performance (Welbourne & Andrews, 1996). This research generally falls under the subject of SHRM. In this context, SHRM focuses on outcomes, integration of various functional areas of human resource management, and it is primarily concerned with a macro perspective on the topic (Lundy, 1994).

Core Theory

Since the last decade, SHRM researchers have increasingly looked to attributes associated with the RBV in their attempts to determine the ways in which human resources contribute to the basic viability and relative performance of firms (Boxall, 1998). Within the field of HRM, the RBV has made significant contributions to the rapidly growing area of SHRM (Wright, Dunford, & Snell, 2001).

Most of the existing SHRM research that has used RBV to form the context of empirical research has focused primarily on the performance implications of some internal attribute (e.g., profits) of a firm. While the literature is replete with empirical and conceptual evidence that conclude that SHRM affects performance, it is important to note that ultimately, most of the empirical studies assess only two variables: human resource (HR) practices and performance (Wright, et al. 2001). Few attempts have been made to show that SHRM practices actually influence the skills or behaviors of the workforce and that these skills and behaviors are related to organizational performance.

Finally, this study provides one of the first tests of the prediction that SHRM significantly impacts the skills and behaviors of the workforce, and that these skills and behaviors are related to the organizational performance of NPOs.

Walker (1994) reported that HR processes are central to the implementation of strategic business change. Integration of HR processes with the business strategy is essential for organizations seeking to achieve and maintain competitive advantage. One central dimension of integration typically addressed in efforts to develop competitive advantage is a highly competent workforce. An organization with a highly competent and stable workforce (i.e., a workforce with the right

skills and capabilities) is likely to be more competitive than its competitors are. This notion formed the theoretical basis for this research.

Purpose of the Study

Although previous studies have contributed to understanding strategic human resource issues, several problems exist with them. Most of those studies were based on large, established for-profit organizations. Furthermore, these issues, such as acquiring and retaining human capital, cannot be addressed without expanding the research into more diverse samples. First, the actions taken by corporate offices (in particular, by headquarters HR departments) might not translate into the behaviors of managers at the business or field levels. For instance, having a retention strategy or an extensive selective staffing process in place might not indicate the degree to which employees or managers at the field level really use these programs. Moreover, NPOs present a unique opportunity for studying SHRM and, perhaps, to address association more adequately.

The purpose of this research was to determine whether SHRM can exert an impact on an organization's performance by direct means, through the improvement of specific human capital skills and behaviors (motivation). More specifically, the areas affecting human capital are the configurations of acquisition,

development, retention, internal labor markets, core competencies, and organizational commitment to employees. Thus, the base of this research resided on the fundamental question of whether the strength of the relationship between the use of SHRM configurations and human capital, and retention impacts organizational performance in the nonprofit sector.

This study departed from previous strategic human resource literature in two ways. First, it drew on a unique sample of NPOs in the Washington, DC area to evaluate the association between a variety of SHRM practices and perceptual measures of organizational performance. With some exceptions (e.g., Delaney & Huselid, 1996), the majority of research on the firm level impact of SHRM has been specific to for-profit firms. Second, rudimentary empirical tests were conducted at the firm level of NPOs to determine the effect of complementarities among SHRM practices on attracting and retaining human capital. According to Hitt, Bierman, Shimizu, and Kochlar (2001), firms vary in performance because they differ in human capital.

Concluding Remarks

As NPOs begin to get larger they look and behave more and more like for-profit organizations. The number of NPOs has grown to more than 1.6 million and the sector employs more than 11 million people. This sector is primarily concerned with the spiritual, educational, social, medical, legal, cultural, and leisure-time needs of citizens. Despite the scope of the field and its impact on national concerns, little attention has been focused on how SHRM practices are used in this highly competitive sector.

According to the RBV of the firm, performance differences across firms can be attributed to the variance in firms' resources and capabilities (Hitt, et al., 2003). Resources that are valuable, unique, and difficult to imitate can provide the basis for firms' competitive advantage (Barney, 1991). Moreover, the RBV framework was used to examine the impact of human capital on organizational performance.

In Chapter II, relevant literature on SHRM and the RBV of the firm is examined and evaluated. Based on the existing literature, the variables that underlie the RBV of the firm are identified. The methods used to conceptualize these constructs

CHAPTER II

APPROACHES TO SHRM: A REVIEW OF THE LITERATURE

"I have no particular talent; I am merely extremely inquisitive."

Albert Einstein

The purpose of this chapter is to review the literature relating to the present study of the impact of strategic human resource management (SHRM) on organizational performance as it relates to the focus of this study. The writings and research of the most significant contributors to the study of SHRM will be discussed in chronological order. This approach was selected because the key theorists discussed were influenced by those who preceded them.

Spearheaded by the work of Wernerfelt (1984) and Barney (1991), one of the key developments in recent SHRM research has been the emergence of the resource-based view (RBV) of the firm. A citation-based approach is used to document the extent to which the RBV has penetrated HR research, focusing on articles in leading business journals that have cited two key papers—Barney (1991) and Wernerfelt (1984)—from 1984 through 2003. The purpose of this literature review is to coalesce and refine understanding of the research studies that are intertwined in the resource-based framework based on their contributions.

The structure of the literature review is as follows. The review begins by describing Wernerfelt's (1984) RBV framework and then considers some of the implications for the economics of the firm that arise from an acknowledgment of path-dependency and associated firm heterogeneity. Next, Barney's (1991) seminal work on the RBV of the firm, which was derivative of Wernerfelt's model, is explored to determine how it has been applied to the theoretical and empirical research base of SHRM. This strand of discourse will focus particularly on the relationship between strategic management and employee relations in the firm. From this perspective, the RBV of the firm offers a useful basis for understanding how human resource management makes a potential contribution to performance at the level of the firm. In the penultimate section, attention is given to workforce characteristics and organizational performance. The chapter concludes with a brief discussion relating to the importance of NPOs in this study.

Resource-Based View

While it was based on the work of Penrose (1959) and others, Wernerfelt's (1984) articulation of the resource-based view conveyed the first coherent statement of the perspective. Wernerfelt's article begins with the statement, "For the firm,

resources and products are two sides of the same coin" (p. 171). This incipient statement has served as a foundation later extended by others (Peteraf, 1993; Prahalad & Hamel, 1990; Rumelt, 1984). These theorists have stayed fairly close to the Penrosian School, emphasizing how resources contribute to diversification and how diversification must match the core competencies of the firm for optimal performance (Priem & Butler, 2001).

Wernerfelt (1984) developed an economic model to analyze firms from a resource perspective rather than from the product side. He believed that the resource perspective provides a basis for addressing key issues in the formulation of strategy for diversified firms. Wernerfelt indicated that both scholars and "managers often fail to recognize that a bundle of assets, rather than the particular product market combination chosen for its deployment, lies at the heart of their firm's competitive position" (as cited in Dierickx & Cool, 1989, p. 1504). He further argued that strategy involves striking a balance between the exploitation of existing resources and the development of new ones.

Strategy and Strategy Making

Any credible attempt at strategic model building involves taking a position on the difficult questions, "What is strategy?" (content) and "How is strategy formed?" (process).

Not only do debates in strategic management literature become relevant, but differing structural contexts also play a role. In other words, the questions are made more complex when one considers the layers of strategy that occur in multidivisional firms (Purcell & Ashstrand, 1994).

Definitions of Strategy

Strategy, in its primitive form, is a set of broad commitments made by a firm that define and rationalize its objectives and how it intends to pursue them. Lenz (1981) defined strategy as the "well integrated sets of ideas and constructs through which problems are spotted and interpreted, and in the light of which actions are invented and selected" (p. 137). Grant (1991) defined strategy as "the match an organization makes between its internal resources and skills...and the opportunities and risks created by its external environment" (p. 114). As the link between the internal and external environments, strategy highlights the notion of fit or equilibrium between an organization and its broader societal context (Snow & Miles, 1983). Strategy, therefore, represents a firm's solution to its profit maximization problem. In other words, strategy can be viewed as a "continuing search for rent" (Bowman, 1974, p. 47), where rent is defined as return in excess of a resource owner's opportunity costs (Tollison, 1982). A resource is defined "as land and equipment, labor (including

worker's capabilities and knowledge), and capital organizational, tangible and intangible)" (Penrose, 1959, p. 74).

Types of Rent

The generation of above-normal rates of return (i.e., rents) is the focal point of competitive advantage (Porter, 1985). In contrast with efficient market theorists found primarily in the Chicago School of Industrial Organization thought (Demsetz, 1982), most resource-based theorists insist that short-term (if not long-term) economic rents are possible (Schoemaker, 1990). Several types of rent may be usefully distinguished. First, rents may be achieved by owning a valuable resource that is scarce (Ricardo, 1817). Resources yielding Ricardian rents include ownership of valuable land, locational advantages, patents, and copyrights. Second, government protection or collusion arrangements that potentially prevent competition are a source of monopoly rents (Bain, 1968). Third, risk-taking and entrepreneurial insight in an uncertain/complex environment (Alvarez & Busenitz, 2001; Barney, 2001; Rumelt, 1987) may achieve entrepreneurial rents. Entrepreneurial rents, however, are self-destructive, mainly because of diffusion of knowledge (Schoemaker, 1990; Schumpeter, 1950). The difference between the first and second best use of a valuable resource is

known as quasi-rent (Klein, Crawford, & Alchian, 1978). Moreover, rents that are appropriable from idiosyncratic physical capital, human capital and dedicated assets are known as "Quasi-rents" (Mahoney & Rajendran, 1992, p. 364). Finally, when resources are specific to the firm, rents are appropriate.

Sources of Rent

The existence and maintenance of rents depend upon a lack of competition in either acquiring or developing complementary resources. Rents derived from services of durable resources that are relatively important to customers and are simultaneously superior, imperfectly imitable, and imperfectly substitutable, will not be appropriated if they are nontradeable or traded in imperfect factors markets (Barney, 1991; Dierickx & Cool, 1989; Peteraf, 1993).

Traditional Strategy Paradigm

The traditional concept of strategy (Andrews, 1971; Ansoff, 1965) considers the resource position of the firm. A firm selects its strategy to generate rents based upon its resource capabilities. Organizations with the strategic capability to focus and coordinate human effort and the ability to evaluate effectively the resource position of the firm in terms of strengths and weaknesses (Porter, 1985) have a strong basis for competitive advantage (Andrews, 1971). Mahoney and Rajendran

(1992) argued that the rent theory clarifies the strengths, weaknesses, opportunities, and threats (SWOT) framework by exactly identifying the strengths and weaknesses of firm capabilities that are needed for competitive advantage.

In principle, structure involves how a firm is organized and governed. It relates to how decisions are made and carried out. Miles, Snow, Meyer, and Coleman (1977) claimed that an organization is both an articulated purpose and an established mechanism for achieving its goal. In this framework, structure determines what the firm actually does under its broadly defined strategy. However, such concerns do not define the universe of strategy. Certain internally focused issues, such as building critical resources of structure, staff, technology, and finance, are also strategic (Boxall, 1996).

One strongly supported approach, the strategic choice perspective, involves defining strategy as a set of fundamental or critical choices about the ends and means of a business (Child, 1972). These choices are critical because they play a decisive role in determining the relative success or failure of the business (Johnson & Scholes, 1993; Pennings, Lee, & Van Witteloostuijn, 1998; Rumelt, 1991). Clearly, certain market-orientation choices, such as the desired competitive position of a particular business unit, are strategic. Although certain internally focused issues—such as building critical resources of

structure, staff, technology, and finance—are strategic, such concerns do not define the universe of strategy in and of themselves (Boxall, 1996). Indeed, a firm may aspire to achieve market leadership, but unless it has built the organization and has the necessary human resources to make this achievable, its executives would be wise to revise their goals accordingly.

The RBV inextricably links a firm's internal capabilities (i.e., what it does best) to its external industry environment (i.e., what the market demands and what competitors offer). Capabilities have proven more difficult to delineate and are often described as intangible assets (Hall, 1992) or intermediate goods (Amit & Schoemaker, 1993). Essentially, capabilities refer to the firm's capacity to deploy resources, usually in combination, using the skills of individuals or groups as well as organizational routines and interactions to affect a desired end.

While most empirical economics research has assigned firms to their primary industries, the RBV is firm specific. Empirical studies have mostly demonstrated the relationship between primary (origin) industries and destination industries. Academicians and practicing managers alike, however, were not aware of the argument regarding the resource-based view (Wernerfelt, 1995) until recently. It was not until after other notable researchers published papers that clarified the nature

of the markets for resources (Barney, 1986a; Dierickx & Cool, 1989; Wernerfelt, 1984) that the resource-based view began to impact the strategy field.

The Resource-Based View within the Conversation of Strategy

The resource-based view is an interesting and popular perspective on strategic management that emphasizes the role of internal resources and capabilities as the foundation for examining firm performance. Dierickx and Cool's (1989) paper is a fundamentally important piece of work because it focuses precisely on the kinds of resources and capabilities that are of central concern to the resource-based view. Previously, a number of scholars had expressed the concern that much of the strategy literature was narrowly focused on product market positions as a basis for competitive advantage and above normal returns (e.g., Barney, 1986a; Wernerfelt, 1984). Moreover, this approach created an analytical problem: If a product market position is achieved or otherwise protected by the deployment of scarce assets, it is necessary to account for the opportunity cost of those assets. Measured returns of product market activities, under normal circumstances, will be inflated if the opportunity cost is not properly appropriated.

Dierickx and Cool (1989) offered a unique perspective on the topic of limits to imitation of valuable, but nontradeable, asset stocks. They suggested that the degree to which an asset

is imitable depends upon the characteristics of the process used to accumulate the particular asset. The following characteristics were identified as impediments to imitation: time compression diseconomies, asset mass efficiencies, interconnectedness of asset stocks, asset erosion, and causal ambiguity.

While Barney (1986a) focused on market imperfections, the central concern of the resource-based view is whether all required assets and resources are necessary to implement a given strategy. However, the tradability of the asset or resource was not examined by Barney. Dierickx and Cool (1989), on the other hand, postulated that nontradeable assets tend to defy imitation because they have a strong tacit dimension and are socially complex. For such assets, history greatly matters. Moreover, would-be imitators are thwarted by the difficulty of discovering and repeating the development process and by the considerable lag involved. Importantly, assets of this nature are also immobile and are thus bound to the firm. Dierickx and Cool illustrated the importance of time compression diseconomies with the following dialogue between a British Lord and his American visitor:

How come you got such a gorgeous lawn? 'Well, the quality of the soil is, I dare say, of the utmost importance,' 'No problem.'" Furthermore, one does need the finest quality seed and fertilizers,' 'Big deal.' 'Of course, daily watering and weekly mowing are jolly important.' 'No sweat, just leave it

to me!' 'That's it.' 'No kidding?' 'Oh, absolutely. There is nothing to it, old boy: just keep it up for five centuries. (p. 1507)

Conceptually, time compression diseconomies and the theory of capital investment's concept of strict convex of adjustment costs both express fundamentally the law of diminishing returns. Dierickx and Cool (1989) proffered the following example to further solidify this point. In general, "MBA students may not accumulate the same stock of knowledge in a one-year program as in a two-year program, even if all inputs other than time are doubled" (p. 1507).

Competency: Distinct and Core

Reed and DeFillippi's (1990) work resolved some subtle definitional differences in the extant resource-based literature. The conceptual relationship between causally ambiguous competencies and barriers to imitation underpins the notion of competitive advantage.

While competency emerged in the 1960s as a desired end result of business policies (Ansoff, 1965), Hofer and Schendel (1978) described distinctive competence under the broad heading of resource deployment. More specifically, they defined competence as the "patterns of... resource and skill deployments that will help it [the firm] achieve its goals and objectives" (p. 25). Although the descriptions of competency vary between these works, Ansoff and Hofer and Schendel remained consistent

on two critical points: (a) Competency is always internally focused, and (b) the way in which a firm utilizes its internal skills and resources relative to the competition is competency-based.

Building on these themes, Reed and DeFillippi (1990) defined distinctive competency as "being the resources and capabilities a firm possesses and the superior way in which they are used" (p. 90). Pradhalad and Hamel (1990) popularized the core competency concept within the strategy literature. They described how core competencies, particularly those that involve collective learning and are knowledge-based, are enhanced as they are applied. While the distinctions between core competencies and capabilities seem blurred, one can hardly conceptualize a firm capability or competency absent from the people who comprise them or the systems that maintain them. Essentially, core competencies are firm-specific resources and capabilities that enable the organization to develop, choose, and implement value-enhancing strategies (Lado & Wilson, 1994).

Characteristics of Competency

Reed and DeFillippi (1990) investigated the relationship between causal ambiguous competencies and barriers to imitation. They proposed three characteristics of competency: tacitness, complexity, and specificity. These characteristics, either individually or in combination, can generate causal ambiguity.

Tacitness

Tacitness applies to resources that encompass skills that are noncodifiable and must be learned by doing (Nelson & Winter, 1982). Generally, tacit resources are not commodities to be purchased in the marketplace. The lifespan of a comparative advantage based on a tacit resource has the tendency to be relatively long. Therefore, when the competency underlying the resource is tacit, such tacitness contributes to competitive advantage (Hunt, 1997).

Complexity

Complexity derived from the interrelationship between skills and assets can generate ambiguity (Reed & DeFillippi, 1990). It would be misleading to suggest that complexity alone leads to competitive advantage. However, the way a firm combines its skills and resources can contribute to competitive advantage. Hence, core competencies that are complex generally originate from a large source of technologies, organization routines, and individual or team-based experience. Moreover, complexity within and among the firm's competencies guarantees that few individuals, if any, have sufficient breadth and depth of knowledge to grasp the overall performance package (Nelson &

Winter, 1982). Essentially, this safeguards such information against expropriation when employees are recruited by competitors. In a similar vein, Barney (1986c) stated that "in complex, high inter-dependent human or technological systems, the causes of success and failure are often difficult to assign... [and]... the establishment of cause-effect relationships can be difficult, and the concomitant assessment of performance may be highly ambiguous" (p. 793). MacMillian, McCafferty, and Van Wijk (1985) argued that complexity, which arises from the necessary combination and fluidity of skills from numerous departments, indeed makes imitation difficult.

Causal ambiguity derived from complexity creates uncertainty regarding the causes of efficiency differences among firms. It prevents imitators from knowing exactly what to imitate and how to imitate it. In other words, a barrier is created when competitors do not fully comprehend the competencies through which advantage was achieved. By extension, causal ambiguity, along with uncertainty of how to imitate, may limit competition and preserve heterogeneity. Arguably, the most effective barriers to imitation are achieved when the advantage "resists erosion by competitor behavior" (Porter, 1985, p. 20).

Specificity

Specificity, defined as the commitment of skills and

resources to the requirements of individual customers, can also generate competitive advantage (Reed & DeFillippi, 1990).

Central to the understanding of specificity are the mutually profitable and long-term relationships between the firm and its customers. These relationships have a profound effect of safeguarding customers from competitors (Alchian, 1984).

Williamson (1985) identified four types of asset specificity: site, physical asset, dedicated asset, and human asset. Each type of specificity "refers to durable investments that are undertaken in support of particular transactions" (p. 55). In other words, transactions are intertwined with the relationship between the firm and the customer, and the "continuity of the relationship is valued" (p. 55). Conversely, as a firm unfolds specific means to extract maximum value from its exchange relations, it also incurs transaction-specific investments with each party that are difficult to supplant (Williams, 1975). Moreover, the business actions that result from bundling resource and skill deployments (competencies) can be highly specific and interdependent with the firm's internal or external transaction partners. Because of these interdependent relationships, skill and resource deployments can remain ambiguous to the competition, and through their specificity, such competencies raise barriers to imitation.

Causal Ambiguity

Lippman and Rumelt (1982) stated that "ambiguity as to what factors are responsible for superior (or inferior) performance acts as a powerful block on ...imitation" (p. 420). This statement illustrates their definition of casual ambiguity: It is the "basic ambiguity concerning the nature of the causal connections between actions and results" (p. 420).

Most firms want to avoid situations in which causal ambiguity is so great that it has the potential to muddle the link between the resources controlled by the firm and the firm's sustained competitive advantage. Here, the host firm does not fully understand this linkage, let alone its competitors or potential competitors (Alvarez & Busenitz, 2001). A situation in which ambiguity is so great that the managers within the firm may not understand the relationship between actions and outcomes represents a form of extreme ambiguity, which is a strong deterrent to factor mobility.

Peteraf (1993)--building upon the work of Wernerfelt (1984), Barney (1986b), Rumelt (1987), Dierickx and Cool (1989), and Castanias and Helfat (2001)--substantially refined the understanding that the resource-based view correctly suggests that focusing on the firm's effects is important in developing and combining resources to achieve competitive advantage. These effects included superior resources heterogeneity within an

industry, ex post limits to competition, imperfect resources mobility, and ex ante limits to competition.

Heterogeneity implies that firms of divergent capabilities are able to compete in the marketplace. A basic assumption of resource-based work is that the resource bundles and capabilities underpinning production are indeed heterogeneous across firms (Barney, 1991). Heterogeneity in a particular industry, however, may reflect the presence of superior resources that cannot be expanded.

Moreover, the high returns of efficient firms are not attributable to economic restraint due to market power. Neither do they depend upon uniqueness or even rarity in the absolute sense (Peteraf, 1993). Theoretically speaking, high returns can be earned by a number of equally efficient firms, as long as an efficiency differential remains between them and other firms. A determinant of firms' ability to sustain competitive advantage is their ability to maintain resources that cannot be expanded freely or imitated by other firms.

While Wernerfelt (1984) emphasized resources and diversification, Barney (1991) gave what is arguably the most detailed and formalized depiction of the business-level resource-based perspective. His framework, which indicates "that organizational resources that are valuable, rare, difficult to imitate and non-substitutable can yield sustained competitive

advantage" (Meyer, 1991, p. 823), is considered the foundation for many RBV studies.

Resource-Based View of the Firm

In 1991, Barney, in his seminal study *Firm Resources and Sustained Competitive Advantage*, expanded Wernerfelt's 1984 model with concepts from both organizational economics and strategic management literature to demonstrate that firms can gain and maintain competitive advantage. Barney coined the phrase "resource-based view of the firm" (p. 101) to describe this new model. He argued that firms' sustained competitive advantage derives from resources and capabilities that are rare, valuable, imperfectly imitable, and not substitutable. Moreover, in the context of the firm, these resources and capabilities are viewed as bundles of tangible and intangible assets that include management skills, organizational processes and routines, and information and knowledge.

Definitions of Competitiveness

Central to the understanding of the resource-based view of the firm are the definitions of competitive advantage and sustained competitive advantage. Barney (1991) described competitive advantage as present "when a firm is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors" (p. 102). On the other hand, a sustained competitive advantage exists when other firms

are unable to duplicate the benefits of this strategy. The resource-based view of the firm's approach to competitive advantage is firm-focused, whereas the traditional strategic analysis paradigm has an industry-environment focus.

Traditional research on sources of sustained competitiveness has concentrated on isolating a firm's opportunities and threats (Porter, 1981, 1985), examining its strengths and weaknesses (Ghemawat, 1999), or evaluating how these dimensions match chosen strategies. These traditional models adopted two simplifying assumptions. First, they assumed that firms within an industry are identical in terms of strategically relevant, controlled resources and pursued strategies. Second, they assumed that should resource heterogeneity develop in an industry, it would be transient, as resources used to implement these strategies can be bought or sold by competitors.

Sources of sustained competitive advantage now represent a major area of research in strategic management. Building on the notions that strategic resources are heterogeneously distributed across firms and that these differences are stable over time, the resource-based view of the firm provides the link between firm resources and sustained competitive advantage (Barney, 1991).

According to the resource-based view of the firm, performance differences across firms can be attributed to variance in firms' resources and capabilities. Resources that are valuable, unique, difficult to imitate, and non-substitutable can provide the basis for a firm's competitive advantage (Amit & Schoemaker, 1993; Barney, 1991). In fact, these are the criteria for sustainable competitive advantage (Peteraf, 1993). Most of the few empirical tests of the resource-based view of the firm have provided support for positive direct effects of resources (Becker & Gerhart, 1996; Huselid, 1995).

Current research on firm strategy and performance has seen a shift from an emphasis on isolating a firm's opportunities and threats (Porter, 1980, 1985) and describing its strengths and weaknesses to a focus on the internal resources of the firm (Barney, 1991; Penrose, 1959; Wernerfelt, 1984). The resource-based view of the firm approach has been central to the understanding of how resources are applied and combined, what makes competitive advantage sustainable, and the nature of rents. Although traditional sources of competitive advantage--such as natural resources, technology, and economies of scale--create value, the resource-based argument is that these sources are easier to imitate. Researchers following the resource-based perspective have argued that intangible resources are more

likely than tangible resources to produce a competitive advantage. In particular, intangible, firm-specific resources, such as human resources, may indeed be an important source of sustained competitive advantage (Lado & Wilson, 1994; Wright & McMahan, 1992).

Itami (1987) suggested that as firms face increasing uncertainty and change in their competitive markets, intangible (invisible) resources are the underlying factors that enable firms to adapt to changes rapidly or be the competitive leaders in their industries.

Definitions of Strategic Human Resource Management

Before proceeding, it is important to understand the evolution of the field of human resource management (HRM). The field has developed various practices to manage people in organizations. In fact, there is no set standard or widely accepted definition of what HRM involves (Butler, Ferris, & Napier, 1991).

The literature reveals a wide range of focal points and presumed central objectives for the various models of HRM. Boselie and Dietz (2003) reported that the literature has not converged on this matter. There is no general consensus on whether the model focuses on involvement (i.e., HRM as a means of engaging employees more effectively in decision making): commitment (i.e., HRM as a means of tapping into, or generating,

a psychological bond to the organization): management (i.e., HRM as a means of delivering better outcomes): or even some combination thereof. Generally, these technical practices have been further grouped into disciplines of selection, training, appraisal, and rewards (Devanna, Fombrum, & Tichy, 1984), which reflect the identifiable functions of the HR department in organizations.

The functional differentiation within the HR field rests in the fact that the field has not evolved with great levels of integration across different core functional areas (Walker, 1994; Wright & McMahan, 1992). Consequently, the various HRM functions have evolved in relative isolation from one another, with little coordination across the disciplines. For example, Wright and McMahan (1992) asserted that while

researchers in the area of performance appraisal have become extremely adept at studying the various techniques that maximize the accuracy and effectiveness of the appraisal process, very little research attention has been devoted to understanding the relationship between appraisal systems and selection programs. (p. 298)

In other words, each function has evolved through technical innovations generated primarily from a micro-perspective that focuses only on the particular function (Wright & McMahan, 1992). The totality of the technical knowledge within each of these functions is commonly referred to as the field of human resource management (HRM).

A review of the literature supports the need to integrate the HR functions. Furthermore, a gap remains in the literature as to what process or model would integrate the management of HR functions with the strategic goals of the organization. A number of approaches to such integration have been proposed. Table 1 provides representative modes of theorizing strategic human resource management.

Table 1

Modes of Theorizing Strategic Human Resource Management

| Theory | Predictor | Representative Authors |
|----------------------------|---|--|
| Universalistic Perspective | Posits a relationship between a given independent variable and a dependent variable that is universal across the population of organizations. "Best practices." | Dewar & Werbel (1979) Delaney, Lewin, & Inchniowski (1989) Huselid (1995) Osterman (1994) Pfeffer (1994) Terpstra & Rozell (1993) |
| Agency Theory | Argues that a direct relationship exists between independent variable and dependent variable. "Alignment of principal and agent's interests." | Eisenhardt (1989) Fama (1980) Fama & Jensen (1983) Sherer, Rogovsky, & Wright (1988) |

Table 1 Continued

| Theory | Predictor | Representative Authors |
|--------------------------|--|---|
| Contingency Perspective | Implies a relationship between independent variable and dependent variable that will be different for different levels of the critical contingency variable. | Fisher (1989) Butler, Ferris, & Napier (1991) Dyer (1985) Davanna, Fombrum, & Tichy (1984) Golden & Ramanujam (1995) Gomez-Mejia & Balkin (1992) Lengnick-Hall & Lengnick-Hall (1988) Milkovich (1988) Schuler & Jackson (1987) |
| Configurational Approach | Assumes that pattern of multiple independent variables is related to a single dependent variable. "Bundles of HR practices" | Miller & Friesen (1984) Venkatraman (1989) Meyer, Tsui, & Hinings (1993) Doty, Glick, & Huber (1996) Doty & Glick (1994) |

Table 1 Continued

| Theory | Predictor | Representative Authors |
|---------------------------------|---|---|
| Resource-based View of the Firm | Implies that there is a direct relationship between independent variables and the dependent variable. Resources must be valuable, rare, imperfectly imitable and non-substitutable. | Barney (1991) Conner (1991) Peteraf (1993) Boxall (1996) Litz (1996) Combs & Ketchen (1999) Alvarez & Busenitz (2001) |

Terminology

- Human resource management (HRM) - refers to the practices and policies needed to carry out the personnel aspects of managing the functions of selecting, training, appraising, rewarding, and providing a safe work environment for the organization's employees (Bohlander, Snell, & Sherman, 2001).
- Human capital - the knowledge, skills, and capabilities of individuals who have economic value to an organization (Bohlander, Snell, & Sherman, 2001).
- High-performance work system (HPWS) - a specific combination of HR practices, work structures, and processes that maximize

employee knowledge, skill, commitment, and flexibility (McMahan, Bell, & Virick, 1998).

- High-involvement human resource practices - a combination of HR practices that encourage employee empowerment, participative problem solving, and teamwork (Youndt, Scott, Dean, & Lepak, 1996).

Evolution of Strategic Human Resource Management

There is some agreement, however, that there ought to be a link between a firm's strategy and HRM (Purcell, 1996). Recently, both researchers and practitioners have begun to approach the area of HRM from a macro-perspective.

Schuler and Walker (1990), noting that human resource strategy is referred to as a short-term focus on business needs, defined it as "a set of processes and activities jointly shared by human resources and line managers to solve people-related business problems" (p. 7). Guest (1989) suggested that SHRM is concerned with ensuring that "human resources management is fully integrated into the strategic planning; that HRM policies cohere both across policy areas and across hierarchies and that HRM practices are accepted and used by line managers as part of their everyday work" (p. 48). Schuler (in press) stated that SHRM is "all those activities affecting the behavior of individuals in their efforts to formulate and implement the strategic needs of the business" (p. 2). Wright and McMahan

(1992) defined SHRM as "the pattern of planned human resource deployments and activities intended to enable an organization to achieve its goals" (p. 298).

The essential commonality inherent to these different definitions, however, appears to be the macro-organizational approach to viewing the role and function of HRM in the larger organization (Butler et al., 1991). Hence, for the purposes of this dissertation, the definition of SHRM offered by Snell, Youndt, and Wright (1996): "organizational systems designed to achieve sustainable competitive advantage through people" (p. 62) will be followed. This approach places importance on the integration of human resources with the rest of a business and its environment. It also suggests that people are valued as strategic resources and represent critical investments in a firm's performance (Lahteenmaki & Storey, 1998).

Further, Snell et al. (1996) suggested that there are several critical elements of SHRM. First, HR must be viewed from a system or bundle perspective. SHRM activities include team-based job designs, a flexible workforce schedule, and quality planned development of the talent required to implement competitive strategy and achieve operational goals (Huselid, Jackson, & Schuler, 1997). During the past decade, compensation systems in particular have been studied as a way to deploy HRM systems strategically (Cutcher-Gershenfeld, 1991; Gerhart &

Milkovich, 1990). Second, these HR practices act in concert to build skills and motivate actions of employees. Finally, the skills and behaviors that are developed and encouraged by these bundles of HR practices should align in a manner that leads to strategic advantage for the firm (e.g., building organizational capabilities).

The concept of the HR system as a strategic resource has implications for both the characteristics and the effects of such a system. Strategic resources are "the set of difficult to trade and imitate, scarce, appropriable, and specialized resources and capabilities that bestow the firm's competitive advantage" (Amit & Shoemaker, 1993, p. 36). Unlike capital investments, economic scales, or patents, a properly developed HR system is an invisible resource (Itami, 1987) that creates value when it is so embedded in the operational systems of an organization that it enhances the firm's capabilities. This interpretation is also consistent with the emphasis on "core competencies" popularized by Prahalad and Hamel (1990, p. 64).

Imitation of human resource strategies that are deeply embedded in an organization is especially difficult. Two of the key factors in this process are causal ambiguity and path dependency. Human resource systems that are path dependent consist of policies that are developed over time and cannot be simply purchased in the marketplace by rivals. While competitors

can understand that a system is valuable, they are precluded from imitation by time compression diseconomies (Dierickx & Cool, 1989).

Strategic Human Resource Management and Organizational Performance

The literature suggests that the resource-based view of the firm can link organizational performance to internal resources (Barney, 1991; Lado & Wilson, 1994; Pfeffer, 1994) based on core competencies (Prahalad & Hamel, 1990). While there has been support for positive associations between firm-level measures of SHRM and organizational performance (Cutcher-Gershenfeld, 1991; Huelid, 1995; Lado & Wilson, 1994), substantial uncertainty remains as to how SHRM practices affect organizational outcomes. As Table 2 indicates, a link has been established between SHRM and performance.

Table 2

Link between SHRM and Organizational Performance

| Study | Performance Measures | Longitudinal Data | Authors |
|--------------------------------|-----------------------------------|-------------------|--|
| Firm | Stock Price | Yes | Welbourne & Andrews (1996) |
| Retail | Customer Satisfaction and Profits | Yes | Baker, Seok-Young, Potter, & Srinivasan (1996) |
| Firm | Profitability | Yes | Huselid (1995) |
| Facility | Quality/Productivity | Yes | Banker, Field, Schroeder, & Sinha (1996) |
| For-profit and Nonprofit Firms | Profitability | Yes | Delaney & Huselid (1996) |
| Firm | Profitability | No | Delery & Doty (1996) |
| Professional Services | Profitability | Yes | Boxall & Steenveld (1999) |
| Professional Services | Profitability | Yes | Hitt, Bierman, Katsuhiko, & Rahul (2001) |

Work Force Characteristics and Organizational Performance

The resource-based view of the firm is the most recent entry into the theoretical discussion of strategic human resource management, which has deep roots in organizational economics and strategy management literature. The resource-based view of the firm differs from the traditional strategy paradigm in that the focus of the RBV's approach to competitive advantage is on the linkage between strategy and the internal resources of the firm. Because organizational performance depends upon the actions of individuals inside the firm, it is critical to examine how workforce characteristics can be used to build and reinforce this capability. The competitive advantage literature (Boxall, 1996; Coff, 1997; Lee & Miller, 1999) identifies three primary workforce characteristics that appear to be related to performance: employee motivation, employee turnover, and the level of human capital.

Employee Motivation

Kovach's (1995) longitudinal study in the area of employee motivation found evidence that employees' attitudes and values toward interesting work are key factors in determining long-term employees' success levels. This finding supports both Maslow's hierarchy of needs (Maslow, 1943) and Herzberg's motivation hygiene theory (Herzberg, 1959). An obvious conclusion is that a

basic need of the worker is job satisfaction, which plays a critical role in organizational performance. Therefore, factors that involve feelings of achievement, professional growth, and recognition have a positive effect on job satisfaction, often resulting in an increase in an employee's total output capacity.

Employee Turnover

Employee turnover also has an impact on organizational performance. High turnover breaks continuity in an organization, resulting in a social environment in which employees are unfamiliar with their colleagues (Nonaka, 1991). Furthermore, high turnover can adversely affect output capacity. High rates of employee turnover increase costs and tend to place less experienced people into jobs. Huselid (1995) reported that the return for an investment in HR practices is substantial. For example, he reported that a "one-standard-deviation increase in such practices is associated with a relative 7.05 percent decrease in turnover and, on a per employee basis, \$27,044 more in sales and \$18,641 and \$3,814 more in market value and profits, respectively" (p. 652).

Human Capital

Finally, the human capital pool refers to the stock of employee talents (knowledge, skills, and abilities) and capabilities that add economic value to an organization (Bohlander, Snell, & Sherman, 2001; Cascio, 2000). Many notable scholars (Becker, 1964; Mincer, 1993) have asserted that human capital often involves non-market activities, such as education. According to Wright, Dunford, and Snell (2001), many theorists focus on the need to develop a pool of human capital--that is, to acquire higher levels of skills (general and/or firm specific) or to achieve a better alignment between the skills represented in the firm and those required by its strategic intent.

Some researchers have contended that because SHRM greatly influences both an organization's human capital and organizational resources, it can be used to gain competitive advantage. Boxall (1996) suggested that human resource advantage (i.e., the superiority of one firm's SHRM over another) resides in its stock of exceptional human talent "latent with productive possibilities" (p. 66).

Such concepts as "causal ambiguity," "social complexity," and "path dependence" are increasingly finding their way into the literature on strategic HRM, at least among those who take a broad view of SHRM as labor management (Boxall, 1998). These

notions have led to questions about the ways in which human abilities, motives, and interactions make all organizations somewhat idiosyncratic.

Wright, McMahan, and McWilliams (1994), drawing on Barney (1991), developed the argument that while a firm's human capital pool may be a source of sustained competitive advantage, "it is virtually impossible for HR practices to be rare, inimitable and non-substitutable" (p. 318). In support of their argument, they distinguished between the firm's human resources (i.e., the human capital pool) and HR practices (i.e., HR tools used to manage the human capital pool). They further argued that the role HR practices must play is to build the human capital pool and stimulate the kinds of human behavior that actually constitute an advantage. Their argument seems tenable. In other words, other firms may copy a firm's practices, but if they lack the quality of employee talent, they will not neutralize the competitive advantage.

As Kamoche (1996) emphasized, it then becomes critical for the leading firm to retain its high-performing workers if it is to sustain an advantage and ensure that it successfully deals with the "appropriability" problem of obtaining a worthwhile return from its employment contracts.

An increasing consensus has emerged among researchers that employee behavior must be considered an important component of

SHRM. For example, Wright, Dunford, and Snell (2001) argued that distinct from skills of the human capital pool, employee behavior recognizes individuals as cognitive and emotional beings who possess free will. Further, they argued, "free will enables them to make decisions regarding the behaviors in which they will engage" (p. 705). This is an important, if subtle, distinction.

A basic tenet of the human capital theory is that firms do not own human capital; individuals do. While firms may have access to valuable human capital, they often do not adequately deploy it to achieve strategic impact, due to poor design of work or the mismanagement of people.

Common sense suggests that it is not possible to argue that all employees or contractors associated with a firm, particularly a large one, constitute a source of rare value. The resource-based view of the firm inevitably drives one to make a distinction between "core" employees, who are critical to value creation, and "peripheral" groups (Boxall, 1998). The inner core consists of those managers, technical specialists, and strategically located workers who are critical for creating value. Meanwhile, peripheral groups are those employees who have appropriate industry skills and are critical to maintaining organizational performance and meeting the firm's commitments to customers without process disruptions (Boxall, 1998). Thus, a

critical factor for increasing organizational performance success lies with a firm's human capital.

Configuration Approach to SHRM

The SHRM literature consistently supports the notion that firms must internally align HR practices with one another in a coherent system approach. A number of researchers have discussed how SHRM addresses human resource issues on the macro level (Schuler & Walker, 1990; Wright & McMahan, 1992). Colbert (2004) posited a configurational view focuses on patterns of HR practices, which together form an integrated HR system. From this perspective the primary focus of inquiry is concerned with how patterns of multiple interdependent variables relate to a given dependent variable. Thus, researchers gather and process many dimensions of organizations, such as strategies, structures, and cultures into typologies and finally treat them as independent variables (Colbert, 2004).

Core HR Practices

SHRM focuses on how organizational characteristics shape HR practices and priorities (Schuler & Jackson, 1989) and how these HR practices contribute to the bottom line (Martell & Carroll, 1995). Wright and McMahan (1992) argued for the integration of core HR functional areas (selection, training, performance management, and compensation) and the alignment of these HR

practices with key organizational contingency variables. This internal alignment of HR practices has been commonly referred to as horizontal fit.

The RBV/SHRM approach focuses on the impact of employees' attitudes and behaviors on performance, with implications for measuring and reporting employees' outcomes. Several authors (e.g., Arthur, 1994; Delery & Doty, 1996; Kock & McGrath, 1996; Wright & McMahan, 1992) have used the HR system approach to construct "bundles" or "clusters" of interrelated HR activities, which are then linked to performance.

Huselid (1995) argued that the use of HR practices for organizational performance is contingent on both the degree of complementary or internal fit among the HR practices and the degree of alignment, or external fit. His construct of HR system practices included comprehensive employee recruitment and selection procedures, incentive compensation and performance management systems, and extensive employee involvement and training systems. Accordingly, this alignment of HR system practices can improve the knowledge, skills, and abilities of a firm's current employees, while increasing their motivation, reducing shirking, enhancing retention of quality employees, and encouraging non-performers to leave the firm.

As Huselid (1995) pointed out, the horizontal or internal fit perspective suggests that the adoption of an internally

consistent system of HR practices will be reflected in better performance, all other things remaining equal. Therefore, it should be easy to identify the best HR practices--specifically, those that lead to valued firm-level outcomes. The external fit perspective raises the conceptual issue of whether any particular human resource policy can be described as a best practice. Indeed, a compelling question is whether a firm's performance is enhanced by the degree to which its HR practices or systems are matched with its competitive strategy (Huselid, 1995). In this study, the focus is to examine the combined effects of multiple practices on organizational performance and the workforce characteristics (human capital, employee motivation, and turnover).

Best Practices Approach

A wealth of empirical evidence exists in the SHRM literature to support the contention that combinations of bundles of HR practices lead to organizational-level outcomes such as financial performance, productivity, and market value of the firm (Boxall & Steenveld, 1999; & Hitt, Bierman, Katsuhiko, & Kochlar, 2001; Welbourne & Andrews, 1996). There is little agreement, however, as to the individual practices that should be included in a system.

In one sense, there is a regrettable linguistic confusion, as researchers have used many different HR practices to represent the same type of HR system (Boselie & Dietz, 2003). In the SHRM literature, for example, certain SHRM activities labeled as a single "practice" might be interpreted as a "system," as a "bundle" or "cluster," or as several different activities. To illustrate, training and development, which is labeled as an HRM practice, is actually a construct of different items like training (Ichniowski, Shaw, & Prennushi, 1997), management and executive development (Huselid et al., 1997), and appraisal (Youndt et al., 1996).

The confusion, as related in the literature, is among different labels. For instance, it is unclear whether the term high-involvement work systems (Kalleberg & Moody, 1994) should be used or whether one should instead use high-involvement work practices (Guthrie, 2001). Disagreement between the approaches mainly exists due to two factors. First, the study lacks a theoretical framework from which to choose HR practices. Next, delineation between the individual HR practices is at best blurred. The fact is that many HR practices can result in the same outcomes. Therefore, it is difficult to understand whether a single set of best practices or configurations will have the greatest impact on organizational performance.

While the best practices approach does provide some initial evidence of a relationship between HR practices and firm performance, this approach may be found lacking, due to its categorical and unconditional acceptance of the "best solution" (Huselid, 1995). For example, following the assumption of equifinality, Doty, Glick, and Huber (1996) succinctly pointed out that multiple HR practices may lead to the same outcome and that individual HR practices may have multiple outcomes. The process of choosing best practices may indeed be confusing, as multiple combinations of HR practices can achieve a desired outcome. For example, Youndt and Snell (1999) demonstrated two different configurations of HR practices are effective for building the overall level of human capital in companies. Therefore, researchers ought not to expect that only one set of best practices will give the same level of achievement to all firms. Instead, researchers ought to look at those practices that are theoretically expected to lead to the outcome variable(s) of interest (Delery, 1998).

Configurational Approach

A configurational approach to SHRM should explore unique bundles of practices that create value for a firm by creating workforce characteristics that produce a competency that is valuable for the firm in its environment. As argued by Datta,

Guthrie, and Wright (2003), this approach may lead to improved organizational performance when HR practices are properly aligned with one or more contingent variables of the firm. In other words, systems of HR practices should be aligned with or reinforce key variables that will ultimately help organizations achieve a competitive position.

Snell et al. (1996) succinctly pointed out that researchers should move beyond simple strategy frameworks and incorporate tests to explore broader configurational perspectives. Therefore, systems or bundles of HR practices may provide firms with a source of sustained competitive advantage if they are designed to lead to certain internal characteristics that provide value for the firm. Therefore, when firms set strategic advantage objectives through their most valuable resource, their people, configurations of HR practices should be used to build the workforce characteristics (e.g., human capital, motivation, and turnover) that will lead to competitive advantage.

Because there are multiple avenues through which HR practices may lead to higher levels of performance (i.e., there are multiple mediators), there may be multiple bundles of HR practices that are concurrently operating inside organizations (Snell et al., 1996). For example, there may be one set of practices used to increase the human capital in a firm, while a different set helps retain employees. Thus, there is an

expectation to find multiple bundles of practices operating within the same organization, each of which is implemented or designed to create and reinforce a specific resource, capability, or key workforce characteristic. Therefore, this study will seek to increase understanding by identifying different configurations of practices that increase human capital and employee motivation while decreasing employee turnover.

Measurement of HR Systems

Many SHRM researchers have used multiple techniques for identifying and choosing individual practices that compose a system or bundle of HR practices. The majority of empirical SHRM studies that have measured the effects of a system of practices have used either factor or principal components analysis to determine whether an index or scale is appropriate to represent a system of HR practices (e.g., Huselid, 1995; Snell & Dean, 1992; Youndt et al., 1996). After reviewing the literature, Delery (1998) suggested that an index approach is a better method of measuring configurations of HR practices.

There is a debate in the SHRM literature as to which measurement is preferred by SHRM researchers. The two measurement methods are fundamentally different. Scales, as they are typically used in industrial/organizational psychology, are meant to represent the "effect indicators" whose values are

underlying the construct. Generally, scales are meant to represent the underlying construct or idea that the researcher is trying to represent (DeVellis, 2003). Essentially, researchers who use scales assume that the items that complete a scale are caused by an underlying construct (Bentler & Kano, 1990). In organizations, there may indeed be an underlying philosophy or rationale for choosing particular HR practices (Delery, 1998).

An index approach, on the other hand, describes a combination of items that are "cause indicators" representing the construct of interest (DeVellis, 2003). For example, Youndt et al. (1996) suggested that the HR practices that make up a system have an additive effect. As such, the systems approach assumes that "firms can improve performance either by increasing the number of practices that they employ within the system or by using the practices in the system in a more comprehensive and widespread approach" (p. 849). For example, organizations may achieve the same levels of human capital by directing resources toward training, recruitment, or a mixture of both. If it is true that two organizations seeking to enhance the skill levels of their employees can use two different systems of HR practices to achieve the same skill level outcomes, then indexes are a more accurate means of measuring systems of HR practices. This study relies on theoretical grounding to determine the

individual practices that lead to the workforce configurations identified earlier.

Linking Configurations of HR Practices to Firm Capabilities

The final critical issue in the field of SHRM is the lack of empirical research examining the mediating links through which HR practices lead to performance. In recent years, multiple theories have been put forth (e.g., human capital theory, behavior theory) suggesting that HR practices lead to higher firm performance by influencing firm resources or employee behaviors (cf. McMahan et al., 1998). While there is very little consensus among SHRM researchers on which systems of HR practices directly impact firm performance (Becker & Gerhart, 1998; Huselid, 2001), there has been empirical work that consistently found that the use of effective SHRM practices indirectly influences firm performance (Dutch & Werner, 2003; Huselid, 1995; Wan, Kok, & Ong, 2003).

Researchers have increasingly relied on the resource-based view of the firm (e.g., Bae & Lawler, 2000; Becker & Gerhart, 1996; Delaney & Huselid, 1996; Harel & Tzafrir, 1999) as a means of explaining why HR practices lead to performance. The RBV clearly emphasizes the role of internal resources as the source of sustainable competitive advantage for firms (Barney, 1991). Following the RBV, HR practices can lead to high levels of firm performance by developing internal capabilities that are

valuable, rare, imperfectly imitable, and non-substitutable (Barney, 1991; Boxall, 1998). For example, configurations of HR practices can lead to a superior level of organizational performance by increasing employee motivation and reducing employee turnover. By examining the specific links between HR practices and organizational performance, this study can significantly add to our understanding of the way in which an HR system of practices can affect organizational performance.

Strategic Human Resources Management Configurations and Organizational Performance

The following section concerns how firms facilitate organizational performance by using a set of multiple HR practices. Following a configuration approach to SHRM (Datta, Guthrie, & Wright, 2003), hypotheses are presented by proposing that multiple bundles of HR practices are related to firm performance through the effect of these HR bundles of practices on several mediating workforce characteristics. Specifically, a proposal is presented that includes four distinct configurations (acquisition, training, internal labor market, and retention) of HR practices that are theoretically related to key workforce characteristics (human capital, employee motivation, and employee turnover). Variations with these workforce characteristics are related to organizational performance.

Acquisition Configuration and Human Capital

An important factor in building a firm's overall level of human capital is acquiring individuals from outside the organization who have specialized knowledge and experiences. HR planning, extensive recruiting, and selective staffing practices have been seen as the keys to acquiring higher levels of human capital (Koch & McGrath, 1996; Terpstra & Rozell, 1993).

Many researchers have reported (Hitt, M., Bierman, L., Katsuhiko, S, & Kochlar, R., 2001; Schuler & Jackson, 1987; Terpstra & Rozell, 1997) that firms can significantly improve performance by acquiring new employees with skill levels that augment internal or external contingency. Firms can significantly improve performance by acquiring new employees with firm--specific skill levels and unique knowledge (Pfeffer, 1998). The acquisition of human capital shares many characteristics with the acquisition of other kinds of strategic factors (Koch & McGrath, 1996). The market for knowledge workers (i.e., those with college education and specialized work experience) can be very competitive. Therefore, the better a firm's SHRM planning function is, the better its insight into the kind of workforce that is required will be.

In the case of SHRM acquisition strategy, uncertainty prevails in terms of how a new hire will perform or fit into the given culture. Information about a person's real ability to

contribute to the competitive position of the firm is not available until after the hiring decision has been made and the new employee has joined the firm (Koch & McGrath, 1996). Thus, firms are forced to rely upon SHRM practices that incorporate recruitment and selection practices to increase the quality of information concerning the future performance potential of job applicants.

In summary, firms will make better informed hiring decisions when they are equipped with knowledge of the market, in terms of worker supply and skill distribution. In general, the more effort an employer is willing to make to reduce uncertainty about the future value of new people, the greater labor productivity the firm will enjoy (Koch & McGrath, 1996).

Training Configuration and Human Capital

In the emulous marketplace of today, competition is often based on competencies--the core sets of knowledge and expertise that give organizations an edge over their competitors. Many organizations emphasize training and development as key components of their strategies for building human capital to maintain their core competencies.

Generally, training activities can directly influence performance in at least two ways. First, they improve knowledge, skills, and abilities (KSAs) relevant to employees' tasks and development. Second, they have been

shown (Harel & Tzafrir, 1999) to increase employees' satisfaction with their jobs and workplace.

According to *Training Magazine's* ongoing industry report, U.S. businesses spend more than \$60 billion each year to provide more than 1.7 billion hours of formal training (Bassi & Van Buren, 1999). To the extent that SHRM practices such as training and development constitute an investment in firm--specific human capital, they indeed may be sources of sustained competitive advantage (Boxall, 1996).

An important key for building human capital is strengthening the core competencies within the existing workforce. Burke and Day (1986) indicated that training positively influences the level of performance of managers. Indeed, training has been found to increase productivity at all levels (Bartel, 1994). Other researchers' (McClelland, 1994; McEvoy, 1997) evidence has supported the notion that training activities build human capital, which in turn influences employee commitment, participant knowledge, and organization--based self-esteem.

Performance Appraisal Configuration

Similarly, Snell and Dean's (1992) findings suggested that firms that emphasize investment in specific human capital use SHRM practices such as performance appraisals to identify KSA deficiencies among current employees and to implement

performance plans that detail how to strengthen relevant KSAs. Further, Snell and Dean contended, firms that implement these SHRM practices are more likely to increase capabilities and knowledge for both individuals and organizations than are firms that do not emphasize such practices.

Performance appraisal systems are among the most helpful tools an organization can use to affect and enhance employee productivity and facilitate progress toward strategic goals (Bohlander, Snell, & Sherman, 2000, p. 318). Performance appraisals, when properly used, can motivate employees to improve performance, provide feedback on performance, and identify gaps between expectations and performance (Locke & Latham, 1990). Moreover, performance appraisals can be used as motivational tools when employees clearly know what is expected of them and how their performance will be measured, and when they have confidence that effort exerted within their capabilities will result in satisfactory performance (Robbins, 1997).

In essence, if performance appraisals are properly designed and administered, they will likely improve employees' motivation to contribute valuable effort when appraisals clearly measure performance, provide constructive feedback, and set realistic goals for improvement or changed behavior.

Organizational Commitment Configuration

Acquiring a high level of human capital is critical, but alone it is insufficient for impacting organizational performance. Employees must also be willing and motivated to contribute their talents and experiences. Ichniowski and Shaw (1999) argued that systems of SHRM practices that encourage participation of employees increase organizational performance.

Organizational Commitment to Employees

Organizational commitment emerged in the 1970s and 1980s as a key factor in the relationships between individuals and organizations (Mowday, Porter, & Steers, 1982). Allen, Meyer and Morrow (1993) found that two complementary dimensions comprise the organizational commitment construct: the affective dimension and the calculative or cognitive dimension (Meyer & Allen, 1984; Morrow, 1993). The affective commitment is the better known of the two dimensions. Organizational commitment has been defined as

the relative strength of an individual's identification with and involvement in a particular organization, which is characterized by belief in and acceptance of organizational goals and values, willingness to exert effort on behalf of the organization, and a desire to maintain membership in the organization. (Mowday et al., 1982, p. 27)

Many researchers have found that organizational commitment can be demonstrated in numerous ways. For example, Eisenberger,

Fasolo, and Davis-LaMastro (1990) found that the organization's commitment to its employees (OCE) may be reflected in its care for employees' well being and satisfaction, in the fairness and compassion of its rewards, and in its investment in competence development and compensation.

Further, Pfeffer (1998) argued that employees may only be willing to contribute their specialized skills and talents when the organization signals a similar level of commitment. Lee and Miller (1999) found that employees are much more willing to contribute to an organization when the organization signals its commitment by investing in the employees in terms of compensation and growth opportunities. These researchers examined whether OCE enhanced workers' performance, initiative, and collaboration in 129 companies.

Leete (2000) argued that the organizational goals of nonprofit firms are often best achieved by intrinsically motivated employees and by employees who identify very closely with the goals of the organization. Intrinsic rewards generally come directly to workers from their satisfaction with their work, pride in their workmanship, or sense that they are helping to build a better community (Thomas, 2002). There are methods of encouraging employee compliance with the goals and principles of the organization, such as incentive and monitoring schemes.

There is a substantial body of theoretical literature linking individual and organizational performance (Gomez-Mejia & Balkin, 1992; Leong, Huang, & Hsu, 2003; Meyer & Smith, 2000; Ulrich & Lake, 1990; Zingheim & Schuster, 2000). Most of the literature suggests that human resource practices should be selected to complement and support the organizational strategy. More specifically, a reward system should attract and retain people with the knowledge, skills, and abilities (KSAs) required realizing the firm's goals (Allen & Helms, 2000).

Hansmann's (1980) seminal work suggested that nonprofit employers use low wages as a screening tactic. Although this approach is meant to deter those who are highly motivated by monetary gain from seeking nonprofit employment, it attracts those for whom love of their work dominates. Some authors have adopted the notion that low wages attract those who are highly motivated by the goals of the nonprofit organization (Handy & Katz, 1998) and have found evidence that is consistent with such wage-practices in some portions of the nonprofit sector (Leete, 2001). High-level professional employees may accept lower levels of pay when they realize that their efforts are helping their communities (Rose-Ackerman, 1996).

Organizational Commitment to Employee Development

Parden (1981) argued that opportunities for advancement and growth are important factors in the development of employee motivation. Firms are more likely to increase the motivation of core employees when those employees are aware of advancement opportunities. It is important to emphasize that employees feel that the organization is supportive when there are clear career paths and opportunities, and when current employees are given consideration over external candidates (Pfeffer, 1998).

Internal Labor Market Configuration

Mobility of employee within the organization, may improve organizational performance. Harel and Trafrir (1999) suggested that employee mobility may improve organizational performance in two ways. First, directly it helps promotes knowledge, experience, and satisfaction in the work environment. Next, it may decrease recruitment, selection, and training costs. Opportunities for internal careers, offered by firms to its workforce, have been found to be positively corrected to organizational performance (Blackwell, Brickley, & Weisbach, 1994; Delery & Doty, 1996; Delaney & Huselid, 1996). Their findings suggest that employee motivation may be increased with enhanced internal mobility opportunities.

In summary, nonprofit firms can increase the extent to which employees are willing to contribute to the organization

through an internal labor market, which provide internal opportunities for mobility.

Retention Configuration and Employee Turnover

The challenge for most nonprofit firms, as with most organizations, is developing the ability to recruit and then retain their most valuable resource: employees. In recent years, there has been an increasing focus on the trends influencing employee retention. In a recent report, turnover in U.S. organizations cost more than \$140 billion annually in recruiting, training, and administrative endeavors (Keep Employees, 2000).

Gordon and Lowe (2002) asserted that employees today are not necessarily money focused, but rather care about intangibles such as sense of involvement, skill growth, and sense of organizational belonging. A University of Minnesota study (as cited in Gordon & Lowe, 2002) indicated that members of this group, affectionately known as the "Xers," emphasize "being appreciated" as the most important factor when considering a job.

Conversely, a progressive configuration of HR practices should help the organization to retain a greater percentage of its human capital. For example, Ensman (2002) argued that problems associated with turnover can be averted with advanced planning and keen management. Similarly, Mirvus and Hackett

(1983) asserted that wages, working conditions, jobs, and work roles serve to motivate employees and reduce turnover when they are linked to job performance. This conception treats compensation, interesting work, influence, and the like as rewards for employees. Hence, rewards are distinguished as extrinsic and intrinsic. Rewards such as material gratification and advancement are classified as extrinsic, while those endemic to the work itself are called intrinsic rewards.

The researchers mentioned above and others (Becker, 1964; Lawler, 1973) have found that individuals value these rewards differently. For example, Mirvis and Hackett (1983) reported that employees in for-profit organizations rated extrinsic rewards as more important, while employees in nonprofit firms rated intrinsic rewards higher.

Beyond the impact of these specific practices, there are certain environments that are more conducive to managing turnover than others. For example, in nonprofit firms, "employees bring to jobs a greater commitment and non-monetary orientation and find more challenge, variety, and autonomy in their jobs" (Mirvis & Hackett, 1983, p. 10). Taken as a whole, these factors contribute to low turnover in nonprofit organizations.

Employees may also be less likely to leave an organization when there is a system of socialization practices in place that

fosters identification with the organization (Ensman, 2002). For example, organizational practices that create a strong sense of organizational commitment (e.g., having events to celebrate success, sponsoring social events, and sponsoring employee activities outside work) help to build strong relationships among employees. A friendly work environment—one that offers supportive bonds (Landy, 1989)—is conducive to lower turnover because employees are reluctant to leave their friends behind (Krausz, Yaakovovitz, Bizman, & Caspi, 1999).

The impact of voluntary turnover on the organization's bottom line has been widely researched (Cascio, 2002; Huselid, 1995). However, very little empirical research exists on the impact of voluntary turnover on coworkers who remain in the organization.

Based on a conceptualization of employee voluntary withdrawal processes, the departure of a coworker is regarded as a "shock to the system... a distinguishable event that jars employees toward deliberate judgments about their jobs" (Lee & Mitchell, 1994, p. 60). Shock may be particularly problematic if those remaining perceive the departure of a coworker as an indication of labor market favorability. The departure of a coworker often signals to those who initially see limited opportunities in the job market that external job opportunities do exist; as such, the departure may heighten their own

intention to try for other options (Krausz, Yaakovovitz, Bizman, & Caspi, 1999).

Retention Configuration

Perhaps a retention configuration may help to attract, retain, and motivate employees to work to their full potential. Izzo and Withers (2002) reported that U.S. work attitudes prior to the mid-1970s demonstrate that workers viewed work as simply as a means to make a living, and not as a primary place for personal fulfillment, growth, or learning. In contrast, 70% of today's workers view work not only as a way to make living, but also as a psychological link to their personal identity. Furthermore, many of today's workers identify the need for balance between their personal and work lives as the most important issue that determines their willingness to stay with an employer. Moreover, workers under age 35 rate balance and flexibility as more important than relationships with their bosses (Izzo & Withers, 2002).

Manochehri and Pinkerton (2003) asserted that telecommuting leads to high employee satisfaction through schedule flexibility, ability to balance family needs and work requirements, and elimination of the time and cost associated with commuting. Moreover, they reported that, aside from performance measures such as increased productivity, increased

teamwork, lower absenteeism, and lower turnover, telecommuters have a higher level of overall satisfaction and less likelihood of leaving the organization as compared to non-telecommuters.

Consequently, telecommuting has become an increasingly preferable alternative to working in the office. According to a Department of Labor report, between 13 and 19 million full- and part-time employees now work from sites outside their employers' place of business (Manochehri & Pinkerton, 2003). The Gartner Group estimated that by the end of 2003 more than 137 million workers worldwide would be involved in some form of remote work.

New evidence supports the contention that certain benefits (e.g., quality of life incentives, flexible schedules, and training) are sometimes more effective at retaining valuable employees than cash (National Institute of Business Management, 2001). Further, this report indicated that more firms are developing retention strategies that focus on technical training, employability training, and flexible work hours. Given this type of environment, employees are less likely to leave; thus, this environment leads to lower turnover.

Building an Organizational Performance Capability

As Boxall (1998) succinctly pointed out, all organizations face a strategic problem: determining how to become and remain a viable player in the firm's chosen industry or sector. In microeconomics, human capital theory suggests that people

possess skills, knowledge, and abilities that create economic value for firms (Youndt, Snell, Dean, and Lepak, 1996). Moreover, the fundamental function of HR strategy in a firm is to secure and maintain the kind of human capital that is essential for the firm's viability. As discussed earlier, a firm's ability to develop better human capital capability is likely to build a human resource advantage in terms of superior problem-solving capability. The firm's workers identify and solve more quality problems than those of competitors do, and they learn how to reduce unit costs and improve customer satisfaction more quickly.

This type of capability takes time to develop and is sensitive to the quality of recruitment, training, and the motivational power of performance appraisal systems. Unlike capital investments, economic scale, or patents, a properly developed HR system is an "invisible asset" (Itami, 1987) that delivers and maintains human capital, thus enhancing the firm's capabilities. The literature reveals an HR "bundle," or system of practices, that influences organizational performance. First, increasing human capital (i.e., the knowledge, skills, and abilities of the workforce) through rigorous employee selection is positively associated with performance (Hitt et al., 2001).

Next, organizational commitment toward employees, which indicates to the employees that the organization cares about

their well being, is invaluable. Lee and Miller (1999) reported that organizational commitment motivates employees to give their best efforts, in terms of their specific knowledge and experience. Finally, strategic human resource practices developed to retain core employees who have specialized knowledge contribute to organizational performance (Gordon & Lowe, 2001).

Many authors have examined the impact of SHRM on firm-level performance (Becker & Gerhart, 1996; Datta, Guthrie, & Wright, 2003; Delaney & Huselid, 1996; Huselid, 1995; Huselid, Jackson, & Schuler, 1997; Lee & Miller, 1999). The literature includes studies that examine the influence of HR system practices on organizational outcomes (Ichniowski & Shaw, 1999; MacDuffie, 1995).

Ferris, Russ, Albanese, and Martocchio (1990) made one of the first major attempts to examine how effective management of human resources might contribute to positive organizational performance. In their study of 2,236 firms from the U.S. construction industry, Ferris et al. addressed the roles played by three important organizational functions and activities in terms of firm performance. First, they assessed the status and importance of the HRM function. Next, the roles of both unions and strategic planning were examined. Finally, Ferris et al. found that firms that had HRM practices and engaged in

formalized HR strategic planning generally performed better (i.e., they achieved larger total sales volume) than did firms that did not have progressive HR practices.

Delaney and Huselid (1996) examined the relationship between HRM strategic systems and perceptual firm performance measures. Examination of perceived organizational performance is not unprecedented in the literature. Researchers have "found measures of perceived organizational performance to correlate positively with objective measures of firm performance" (p. 954).

In research that included 590 for-profit and nonprofit firms, Delaney and Huselid (1996) found positive associations between human resource management systems and perceptual firm performance. It has been long and widely asserted that enhancing human capital is a preeminent organizational resource and key to achieving sustainable competitive advantage (Pfeffer, 1994). Delaney and Huselid's study indicated that progressive HRM strategic systems are positively related to perceptual measures of organizational performance, adding to the growing empirical evidence suggesting that such assertions are indeed credible.

In a subsequent study, Huselid, Jackson, and Schuler (1997) argued that the link between HR practices and organizational performance needs further empirical research. They examined the impact of HR technical effectiveness versus HR strategic

effectiveness on corporate financial performance. The sample size of 239 U.S. firms, which was a fair representation of the business landscape, included manufacturing (36%), financial services (14%), utilities (8%), and miscellaneous service industries (42%). Their findings showed that strategic HR practices' effectiveness is positively associated with corporate firm performance.

Human Capital and Organizational Performance Capability

In a recent study, Myers, Griffin, Daugherty and Lusch (2004) reported that gaining knowledge through higher education should provide employees with greater knowledge based upon which to carry out important tasks, thus enhancing job performance. Myers et al. (2004) concluded that education was not directly related to employee performance. While their findings did not indicate that education is unimportant, it simply reflected that specific job-related skills are more important than an employee's history.

Youndt et al. (1996) showed that, particularly in the context of a quality manufacturing strategy, employee productivity is higher in manufacturing plants where the SHRM system is focused on enhancing human capital. Bae and Lawler (2000) found a positive relationship between organizational performance and HRM practices. In their study, they determined that management's commitment to human capital accumulation

keenly helps firm performance. Similarly, Gelade and Lvery (2003) found that favorable psychological environments in the workplace and progressive SHRM practices such as management of job demand and support for professional development are associated with superior organizational performance.

All of these studies generally revealed a positive relationship between HR practices and firm performance. Based on the aforementioned arguments, it is expected that those organizations that invest in human capital that possess greater specialized KSAs (knowledge, skills, and abilities) and experience are more likely to increase organizational performance.

Turnover and Organizational Performance Capability

As Gordon and Lowe (2002) succinctly pointed out, "the critical challenge facing business comes down to keeping their employees. After all, employees are the most valuable organizational resource, and good employees should be thought of in terms of investments needing frequent rewards" (p. 204). Similarly, March and Simon (1958) noted that because organizations rely on human capital to create value, a firm's success is greatly dependent upon its ability to retain this valued resource. Boxall (1998) emphasized the distinction between "inner" and "outer" human capital. He argued that "inner core" human capital is comprised of those managers, technical

specialists, and strategically located workers who are critical and responsible for value creation. Meanwhile, the "outer" core is readily made up of human capital with appropriate industry skills, with whom stable employment relations must be built if the firm is to maintain performance.

Since valuable knowledge, skills, and abilities are stored in and occur with human capital, it is possible for firms to lose these valuable resources when more astute rivals induce talented employees to resign (Coff, 1997). In this light, there is clearly a problem with resources derived from the contributions of human capital. Because the nature of human capital is such that the knowledge, skills, and abilities belong to the workers and not to the organization, these valuable resources are mobile and free to leave the organization.

Employee turnover represents a huge potential loss in productivity and continuity, as well as an increase in operational cost. The potential of turnover to affect firm productivity has not been lost on several scholars, who linked data from progressive SHRM practices with valued firm-level results. For example, Arthur (1994) found in 30 steel "minimills" that those firms with progressive HR practices emphasizing the development of employee commitment had lower turnover and higher productivity than firms that did not have progressive HR practices. Similarly, Huselid (1995) performed a

comprehensive evaluation of nearly 1,000 firms and reported that systems of high-performance HR practices have an economically significant impact on employee turnover and productivity.

Each of these studies examined the impact of HR system practices on employee turnover or productivity. The literature clearly provides support for the notion that some configurations of SHRM practices are likely to encourage employees to remain with the organization. While some attrition is acceptable—in that the cost of keeping unproductive workers may be far more than the cost of recruiting and training a new, more effective performer—high turnover can negatively impact organizational performance.

As discussed above, organizational performance is dependent upon assembling and maintaining human capital with unique or specialized knowledge and experience. Of course, it is difficult for organizations to perform at a superior level if the specialized knowledge of the workforce continues to leave the organization. Further, it will be difficult for organizations to build the necessary performance capability if there is continuous turnover within the organization (Boxall, 1998). Simultaneously, in nonprofit firms and nongovernmental organizations, the increasing emphasis on knowledge-based competitiveness in the current turbulent environment heightens the importance of human capital. Therefore, it stands to reason

that in order to increase organizational performance, firms must build and retain a satisfactory core of human capital to secure viability and minimize turnover for acceptable profit performance.

Nonprofit Firms

To test the proposed relationships above, it is important to identify the industry or sector where these conditions are likely to make the relationships relevant. Nonprofit and nongovernmental organizations represent such a sample, as they are faced with extremely complex and turbulent environments characterized by stringent federal and state laws that prohibit distribution of net earnings to members, officers, or trustees (Mirvis & Hackett, 1983). In this study, an argument is presented that because nonprofit organizations rely disproportionately on intrinsically motivated employees and donations, they provide a particularly interesting context for examining some of these issues. Thus, it is expected that nonprofits (NPOs) that can build and support this capability will outperform nonprofits that do not have practices in place to build and support this capability.

Concluding Remarks

With these lofty objectives clearly spelled out, and relevant literature reviewed, attention is now turned to chapter III, where the methodology for which this dissertation is based is described in detail. Specifically, a discussion is presented regarding the sample and research procedures, level of analysis issues, and proposed measures for the independent, mediating, and dependent variables.

CHAPTER III

METHODOLOGY

*"I keep six honest serving-men
(They taught me all I knew) and
Their names are What and Why and When and How and Where and
Who."
Rudyard Kipling, Just So Stories*

This chapter presents an overview of the methodology on which this dissertation is based. The following aspects of the methodology are described in detail: research process, research questions, hypotheses, population and sample, questionnaire design, data collection, variables and measures (including validity and reliability estimates), and level of analysis. The specific HR practices and organizational performance measures comprising the proposed conceptual model are also reviewed. The chapter concludes with a discussion of the statistical analysis employed to test the model, which is the focal point of this research.

Overview of the Research Process

The primary objective of this study was to ascertain the relationship between SHRM practices and perceptions of performance at the organizational level. The SHRM phenomena addressed by this study were as follows: (1) acquisition, (2) training, (3) retention, and (4) internal labor market. The outcomes were operationalized with intent to leave,

organizational performance, and human capital. These variables were considered sufficiently broad to capture the key dimensions of a SHRM system (Wan, Kok, & Ong, 2003).

Data were gathered from two respondent groups within each NPO. First, the HR manager completed an HR configuration questionnaire that measured the HR practices used in the organization (i.e., those related to acquisition, training, retention, and internal labor market) and perceptions of organizational performance. Following Harel and Tzafrir (1999) the HR manager within each organization completed the questionnaire, which assessed organizational performance. The second source of information was core/essential employees, who were asked to complete an HR capital questionnaire (regarding education, specific work experience, and intention to leave).

Independent Variables

The prime objective of this study was to ascertain the relationship between SHRM practices and organizational performance. The constructs used to measure these two sets of variables are described below.

Four variables were used to model a nonprofit organization's SHRM system:

- Retention
- Acquisition (selective staffing)
- Extensive Training

- Internal Labor Market

The HR manager completed this questionnaire. The items on this questionnaire appear in Appendix K. The constructs and their measures are described below. The four variables were considered sufficiently broad to capture the key dimensions of a SHRM system (Snell & Dean, 1992).

Retention Configuration of HR Practices

Retention was assessed using a seven-item scale ($\alpha = .72$) developed by Collins (2000) that measures the degree to which strategies are established, both at the organizational and individual levels, to retain human capital. The scale appears in Appendix A. The retention configuration was based on the theoretical rationale developed in Hypothesis 4. A retention configuration that offers work situation alternatives that foster a balance between work and family (e.g., telecommuting options) can serve as an incentive for employees. Such a configuration can permit an organization to attract and retain the best and brightest workers. Respondents were HR managers.

Acquisition Configuration of HR Practices

Organizations can influence the skills of employees through selectivity in hiring. Drawing upon previous empirical work (Bae & Lawler, 2000; Wan, Kok, & Ong, 2003), this study measured the extent of firms' use of selective staffing with Snell and Dean's (1992) acquisition scale. This instrument measures the

extensiveness of a firm's selection process. A firm's level of selectivity is demonstrated, for instance, by respondents' evaluations of the importance accorded by their organizations to acquiring high levels of human capital in terms of the time, money, and number of employees devoted to accomplishing this goal. The scale appears in Appendix B. This scale, which has been used in previous studies in the literature, captures aspects of acquisition (staffing practices) such as, the amount of resources (i.e., time and money) spent on acquiring staff. A sample item is "We spend a great deal of money to ensure that we hire the right person for the job" (1 = strongly disagree, 5 = strongly agree). Table 3 presents reported reliability estimates for the acquisition instrument used in this study.

Table 3

Reliability Estimates for Acquisition Scale

| Construct | Authors | α | Sample Item |
|-------------|----------------------------|----------|---------------------------------|
| Acquisition | Snell & Dean(1992) | .83 | It is extremely |
| | Harel & Tzafirir (1999) | .79 | important to select the |
| | Wan, Kok, & Ong (2003) | .83 | best person for a given job. |

Training Configuration of HR Practices

The training instrument adapted from Snell and Dean (1992) is a seven-item index of the extensiveness of employee training. This questionnaire was chosen over other questionnaires used in SHRM studies because it assesses the level of formal training and the effectiveness of the overall training program as identified by Cascio (2000), Delaney and Huselid (1996), and Wan, Kok, and Ong (2003). Managers rated the effectiveness of their organization's training program on a scale from one ("very ineffective") to five ("very effective"). For the wording of specific items, see Appendix C. Table 4 presents the published reliability estimates for the measure.

Table 4

Reliability Estimates for Training Scale

| Construct | Authors | α | Sample Item |
|-----------|-----------------------------|----------|--|
| Training | Delaney & Huselid (1996) | .88 | How extensive is the training process for members in your work unit? |
| | Harel & Tzafrir (1999) | .76 | |
| | Wan, Kok, & Ong (2003) | .81 | |

Internal Labor Market

In the present study, organizational commitment to fostering internal promotion was conceptualized as the internal labor market (ILM; Delaney & Huselid, 1996). A four-item scale was used to measure the organization's willingness to extend opportunities to employees through internal promotion. An organization's ILM was associated with greater promotion opportunities, higher earnings, the development of firm-specific skills, and greater employee autonomy (Ngo & Tsang, 1998) than exist in organizations that seek to use the external labor market exclusively (Harel & Tzafrir, 1999).

The ILM instrument assessed the extent to which employees were made aware of internal promotion opportunities and the extent to which internal candidates were given priority over external candidates. The HR manager indicated the extent to which each item described the practices of his or her organization using a five-point scale. The measure appears in Appendix D. The scale anchors range from strong disagreement (1) to strong agreement (5). The score indicates the level of emphasis an organization places on providing employees with internal mobility opportunities. Table 5 presents the reliability estimates for this scale. This scale assesses key components of the ILM for employees, such as provision of employment security and form of work structure, which have been

demonstrated to affect firm performance positively (Ichniowski, Shaw, & Prennushi, 1997; Osterman, 1994).

Table 5

Reliability Estimates of ILM Measure

| Construct | Authors | α | Sample Item |
|-----------------------|--------------------------|----------|--|
| Internal Labor Market | Delaney & Huselid (1996) | .82 | Consideration given to internal candidates over external ones. |
| | Harel & Tzafirir (1999) | .74 | |
| | Ngo & Tsang (1998) | .83 | |

Taken as a whole, these four constructs, the independent variables, provide a reasonable reflection of progressive SHRM practices. These constructs are the independent variables in the first four hypotheses.

Dependent Variables

Three dependent variables were used to test the model:

- Intent to Leave
- Organizational Performance
- Human Capital

Data on the dependent variables were derived from responses of core employees and HR managers. Core employees reported data on human capital (education, work experience and intention to leave). HR managers reported perceptual data about the organization (quality of products and services, development of new products, programs, and satisfaction of clients).

Core employees were defined as employees who are critical to creating value (e.g., scientists, computer specialists, doctors, professors). The inner core consists of those managers, technical specialists, and strategically located workers who are critical to creating value. Years of work experience within the nonprofit sector were summed at the organization level to create total years of work experience.

Intent to Leave

Employees' intention to leave was measured with a four-item scale developed by Cook, Hepworth, Wall, and Warr (1981). Krausz, Yaakobovitz, Bizman, and Caspi (1999) described intention to leave as an employee's propensity or self-reported desire to leave an organization. The scale appears in Appendix E. A sample item is "My coworker(s) and I talk often about quitting." Core employees were asked to rate their agreement with the statements on a five-point Likert scale ranging from strong disagreement (1) to strong agreement (5). The items were written in such a way that high scores reflect greater intention to leave the organization. The scores were summed at the organizational level. Table 6 presents the reliability estimates for this scale.

Table 6

Reliability Estimates for Intent to Leave Scale

| Construct | Authors | α | Sample Item |
|-----------------|--------------------------------|----------|-------------------------------|
| Intent to Leave | Krausz, Bizman, & Weiss (1989) | .75 | I often think about quitting. |
| | Krausz et al. (1999) | .74 | |
| | Igbaria & Guimaraes (1999) | .80 | |

Perceived Organizational Performance

Perceived organizational performance was a dependent variable in this study, as in previous research (Delaney & Huselid, 1996; Harel & Tzafrir, 1999; Smith-Perry & Blum, 2000; Youndt et al., 1996). This measure assessed employees' perceptions of an organization's performance in relation to other firms in the same industry. This five-item instrument appears in Appendix F. This instrument was selected because it is a popular measurement of organizational performance in SHRM studies (Delaney & Huselid, 1996). Many studies provided evidence of the reliability of perception of an organization's performance. Respondents were the HR managers from each unit. Table 7 presents the reported reliability for perceived organizational performance.

Table 7

Reliability Estimates of Perceived Organizational Performance

| Construct | Authors | α | Sample Item |
|----------------------------|--|----------|---|
| Organizational Performance | Delaney & Huselid (1996) | .85 | How would you compare the organization's |
| | Harel & Tzafrir (1999) | .76 | performance over the past 2 years to that of |
| | Smith-Perry & Blum (2000) | .87 | other organizations that do the same kind |
| | Youndt, Snell, Dean, & Lepak (1996) | .80 | of work? |

A strong association between measures of perceived organizational performance and objective measures of firm performance has been demonstrated (Dollinger & Golden, 1992; Powell, 1992). In the case of NPOs, the use of perceptual measures is appropriate, as objective measures are generally unavailable. Perceived organizational performance was operationalized as the perception of an organization's current performance relative to other firms in its industry with respect to product/service quality, employee productivity,

customer/client satisfaction, and development of new products or services.

Self-reported performance measures were chosen for several reasons. First, as this study focuses on operations--which in many instances are at the decision-making unit (DMU) rather than the corporate level-objective financial performance measures were not available for the entire sample. Second, the cross-industry sample included entities that were not required to report financial information, such as religious organizations (schools and missions) and small charities. Thus, standardized financial measures for these organizations were unavailable for comparison.

Human Capital

Human capital was defined as the stock of skills an employee had developed through education and previous work experience (Mincer, 1993). As operationalized in this study, it has two dimensions: (1) the level of education attained by core workers (a proxy for articulable knowledge) and (2) total work experience in the organization's industry (a proxy for firm-specific tacit knowledge). The items measuring education and experience appear in Appendix G. Work experience was measured with two questions concerning core workers' years of professional experience in their current industry and organization. Education was assessed through questions that ask

respondents to indicate the number of years of postsecondary education they had completed. A trade or associate's degree was coded as 1, an bachelor's degree as 2, a master's degree as 3, and a terminal degree as 4. Unlike work experience, which tends to be industry-specific, university education typically affords a relatively broad base of knowledge (Becker, 1964) that an individual can use within multiple industries.

Research Questions

The research questions listed below were designed to uncover relationships among the underlying strategic human resource practices (variables) that affect the organizational performance of nonprofit firms.

1. Is there a relationship between SHRM configuration (acquisition, training, and internal labor market) and the level of human capital embodied in nonprofit organizations?
2. Is there a relationship between the HR retention configuration and employee intent to turnover?
3. Is there a relationship between human capital and organizational performance?

These specific hypotheses derived from the research questions are described in the following section.

Research Hypotheses

Researchers have observed (Delaney & Huselid, 1996) that the variables that underlie and correlate with organizational performance have not been fully developed in a holistic model that describes their relationship to the performance of nonprofit firms. Therefore, this study tested the effect of SHRM practices (individually and in combination) on perceptual measures of organizational performance. These hypotheses were intended to link empirical findings with theoretical predictions concerning organizational performance for NPOs. The relationships discussed in the formal hypotheses are presented as a structural equation model (SEM) in Figure 1. It suggests that SHRM practices have a direct and positive impact on the outcome criteria of intention to leave, organizational performance, and human capital.

The presented SEM contains latent variables (human capital and intent to leave). Raykov and Marcoulides (2000) asserted there is no direct operational method for measuring latent variables or a precise method for assessing their degree of presence. Manifestations of a construct can be observed by measuring specific features of the behavior on some set of subjects in an environment (Raykov & Marcoulides, 2000). Error terms have been omitted for simplicity.

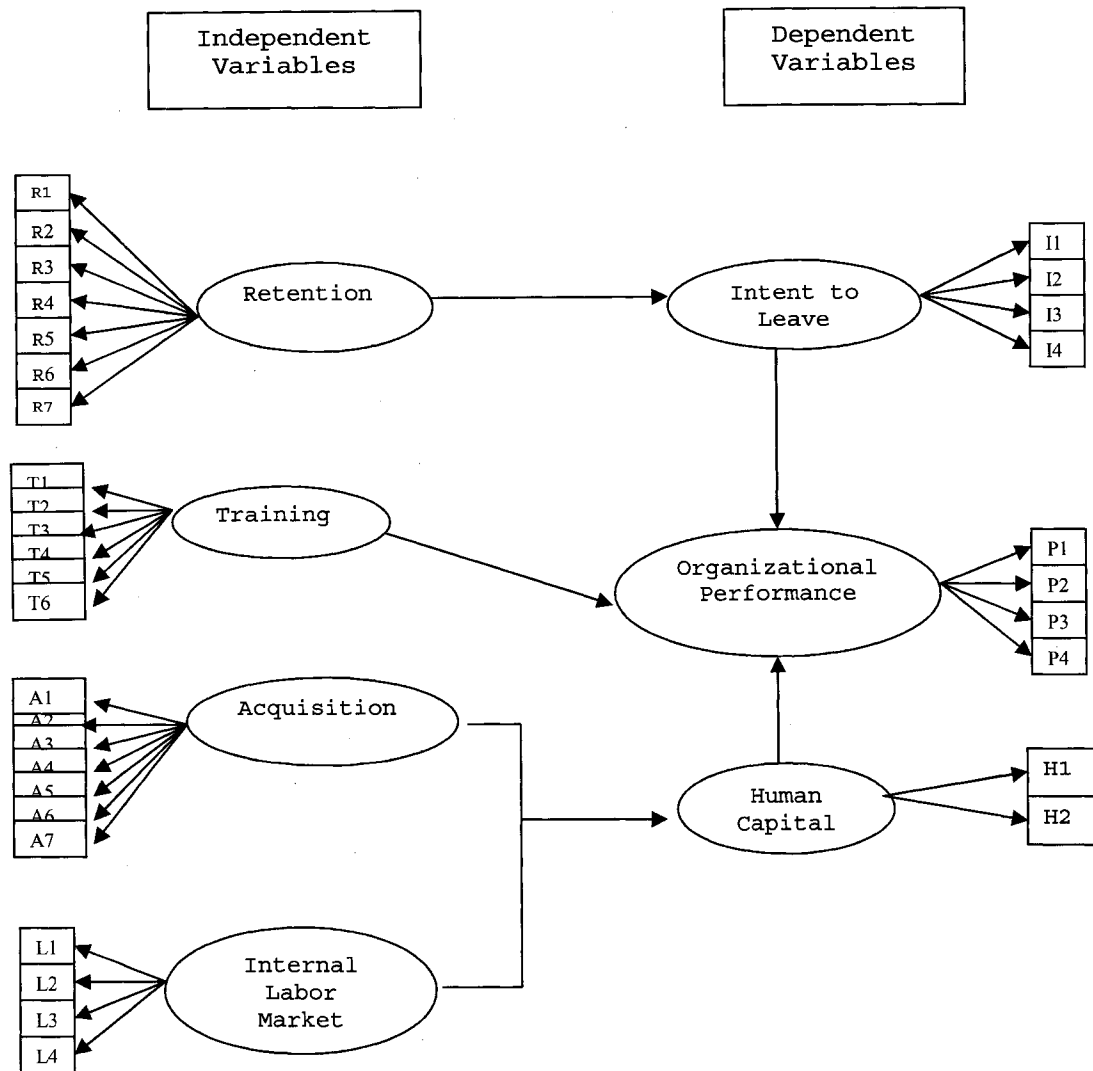


Figure 1. Hypothesized Model of the Influence of Human Resource Practices on Turnover, Human Capital, and Organizational Performance

Legend

R1-R7 Retention Scale
A1-A7 Acquisition Scale

T1-T6 Training Scale

L1-L4 Internal Labor Market Scale

I1-I4 Intent to Leave Scale

P1-P4 Organizational Performance Scale

H1-H2 Human Capital Scale

Table 8 lists the independent variables, data sources, response formats, and a sample items.

Table 8 Independent Variables

| Independent Variables | Data Source | Response Format | Number of Items | Sample Item |
|-----------------------|-------------|---|-----------------|--|
| Retention | HR Mgr | 1=strongly disagree 5=strongly agree | 7 | We select individuals who believe in our core values. |
| Acquisition | HR Mgr | 1=strongly disagree 5=strongly agree | 7 | Emphasis is placed on the staffing process in this unit. |
| Training | HR Mgr | 1=very little 5=great deal | 6 | How extensive are your training programs? |
| Internal Labor Market | HR Mgr | 1=strongly disagree 5=strongly agree | 4 | Employees are made aware of internal opportunities |

Table 9 presents the dependent variables, along with data sources, response formats, and sample items.

Table 9 Dependent Variables

| Dependent Variables | Data Source | Response Format | Number of Items | Sample Item |
|----------------------------|----------------|---|-----------------|--|
| Intention to Leave | Core Employees | 1=strongly disagree 5=strongly agree | 4 | I will actively seek a new job in the next year. |
| Organizational Performance | HR Mgr | 1=much worse 5=much better | 4 | The satisfaction of customers is |
| Human Capital | Core Employees | Check degrees that you attained. | 4 | Types of degrees listed. |

Hypothesis 1: An extensive acquisition practice is correlated with higher levels of human capital.

Null Hypothesis 1: An extensive acquisition practice is not correlated or negatively correlated with higher levels of human capital.

Hypothesis 2: An extensive training practice is positively correlated with perceived organizational performance.

Null Hypothesis 2: An extensive training practice is not correlated with perceived organizational performance.

Hypothesis 3: An internal labor market is positively correlated with higher levels of human capital.

Null Hypothesis 3: An internal labor market is not correlated with higher levels of human capital.

Hypothesis 4: A retention configuration is associated with lower levels of employees' intention to leave.

Null Hypothesis 4: A retention configuration of HR practices is not associated with employees' intention to leave.

Hypothesis 5a: Higher levels of human capital (education) are positively correlated with organizational performance.

Null Hypothesis 5a: Higher levels of human capital (education) are not correlated with organizational performance.

Hypothesis 5b: Higher levels of human capital (work experience) are positively correlated with organizational performance.

Null Hypothesis 5b: Higher levels of human capital (work experience) are not correlated with organizational performance.

Hypothesis 6: Lower levels of employees' intent to leave (i.e., higher levels of retention) are positively correlated with organizational performance.

Null Hypothesis 6: Lower levels of employees' intent to leave (i.e., higher levels of retention) are not positively correlated with organizational performance.

Population and Sample

The researcher sought participation from NPOs in the Washington, DC metropolitan area (including the District of Columbia, Northern Virginia, and Maryland). Two reputable databases containing information on U.S. NPOs--the 2003-2004 'Non Profits Time' directory (NPT) and the National Center for Charitable Statistics (NCCS)--were used to compile a list of candidates for the sample.

This research dealt with the organization-level constructs of organizational performance and SHRM practices, two phenomena that senior HR managers in NPOs are uniquely qualified to

address. As the researcher had to drive to the offices of senior HR managers to collect data, the geographic scope of this study was subject to constraints. Specifically, the list of potential participants was limited to organizations located within a 100-mile radius of the researcher's home in Columbia, Maryland.

In addition, as in similar studies (e.g., Huselid, 1995), the researcher solicited participation only from organizations with a minimum of 25 employees. According to Miner and Miner (1985), most firms with 25 or fewer employees do not maintain a formal department to deal with HR issues. Only those firms in which a senior HR manager was identified were included. Names of senior HR managers were obtained from the 2003 NPT directory and the Society for Human Resource Management Membership Directory.

Finally, in keeping with the common practice used when setting up panel studies with the NCCS database, the sample in this study consisted of only those NPOs appearing in each panel year. This provided a stratified random sample of NPOs within the Washington, DC metropolitan area.

From this list, the target population of NPOs numbered 401. The anticipated response rate for participation was 33%. This expected response rate is consistent with other studies of HR practices (questionnaire-based) studies of HR practices reviewed by Becker and Huselid (1998), which had response rates ranging

from 6% to 34%, with an average of 17%. A 33% response rate would yield approximately 132 organizations.

Data Collection

The researcher collected data in two stages (i.e., the senior HR manager and from a set of identified core employees) within each participating organization. The protocol used to gain access to the HR manager was similar to that employed by Youndt, Snell, and Lepak (1996). First, a package containing a cover letter (Appendix I) outlining the project was mailed to 401 HR managers in the organizations that constituted the population. After approximately five days (which represented enough time for the HR manager to receive and read the letters), a follow-up phone call was placed to each HR manager to schedule a time to distribute the survey forms. This onsite visit served two primary purposes: (1) it provided an opportunity to gain the support and endorsement of the HR manager, and (2) it minimized the time needed to identify five core employees within the organization from whom data were collected.

In the second stage, the researcher obtained permission from the HR manager to solicit volunteers from the workforce to participate in the study. As this study involved the collection of sensitive information from respondents regarding manager/subordinate relationships, confidentiality was extremely

important. Following Snell and Dean (1992), each questionnaire was stamped with an identification number, which was recorded on a master list. This procedure ensured that respondents had complete confidentiality and that manager/subordinate relationships were not disturbed or compromised. In addition, to prevent the perception of coercion, the researcher signed a written statement indicating that none of the responses gathered in the surveys would be shared with management, that all individual responses would be summed, that no individual could be identified by his or her responses, and that participants' involvement in the study was strictly voluntary. By assuring absolute confidentiality, the researcher hoped to secure an acceptable response rate and honest answers. Summary data reports were provided upon request, aggregated by the organization's activity code.

In order to permit proper grouping of responses from HR and core employees, the questionnaires distributed within each organization were pre-coded in batches. For example, an HR questionnaire would be stamped with the number three in the top right corner. The questionnaires that corresponded with this HR questionnaire for core employees (Human Capital Questionnaires) would then be numbered 3-1, 3-2, 3-3, 3-4, and 3-5. Such coding significantly decreased the likelihood that the questionnaires would be subject to cross-sectional contamination.

Questionnaire Design

Measures regarding human capital and intent to leave (both of which are dependent variables) were collected from the identified core employees. This particular scale appears in Appendix J. The questionnaire consisted of seven questions. Questions three - six dealt specifically with core employees' work experience. The last question asked respondents to quantify their educational levels. These questions provided data necessary to assess the relationship of SHRM practices with human capital and organizational performance.

Measures of SHRM practices (independent variables) and organizational performance (one of the dependent variables) were collected from HR managers. The questionnaire appears in Appendix K. This questionnaire consists of 33 questions. The acquisition configuration consists of seven questions related to acquiring staff. Under the training section, there are six questions to assess the type and effectiveness of employee training. HR managers were asked seven questions to assess practices in place to retain talent in the organization. Next, the HR managers were asked to evaluate the internal labor market by four questions. Finally, HR managers were asked to evaluate organizational performance by five questions.

Questionnaire Pretest

The questionnaires were pretest with HR managers/professionals at three NPOs (a small humanitarian agency, a private university, and a local health clinic) with characteristics reflective of the organizations in the identified sample. Issues assessed during the pretest were face validity, instruction and statement clarity, and questionnaire layout and length. Improvements were made to the questionnaire based on respondents' comments. Due to the possibility of common-source bias with surveying the HR manager, the scale items were deliberately intermingled with one another. In addition, the organizational performance section was intentionally placed toward the end of the questionnaire to limit the possibility of respondents rationalizing their answers.

Statistical Data Analysis

Structural equation model (SEM) was used in this investigation. Byrne (2001) describe SEM as a "statistical methodology that takes a confirmatory (i.e., hypothesis-testing) approach to the analysis of a structural theory bearing on some phenomenon" (p.3). Structural equation models are widely used in a number of disciplines, including economics, marketing, psychology, and sociology. They have been applied in

investigations based on both survey and experimental data (Diamantopoulos & Siguaw, 2000).

While structural equation modeling (SEM) is an intrinsically confirmatory technique, it is often used in practice in an exploratory way. Various tools have been developed for adapting this confirmatory technique to exploratory uses (MacCallum, 1986). These include the use of modification indices and Lagrange multiplier tests for selectively adding parameters to a model, and the use of critical ratios and Wald tests for selectively eliminating parameters (Joreskog & Sorbom, 2001).

A major characteristic of structural equation models is that they explicitly take into account the measurement error that is ubiquitous with testing concepts or latent variables that are not directly measurable (e.g. motivation and attitudes; Raykov & Marcoulides, 2000). Errors of measurement arise with latent variables because of imperfection in the various instruments (questionnaires test, etc) used to measure such abstractions as people's behaviors, attitudes, feelings, and motivation. According to Joreskog and Sorbom (1979), it is usually impossible to obtain perfectly reliable variables, even if a valid measurement is constructed.

Generally, the SEM approach makes assumptions about the structure of population data. Stated in the most restrictive

form, the estimation methods assume that the measures used to evaluate both the predictor and criterion variables are multivariate and normally distributed (Jaccard & Wan, 1996). Consequently, Jaccard and Wan (1996) reported that under such constraints, estimators of regression coefficients used for SEM have four properties. They are

1. asymptotically unbiased,
2. consistent estimators,
3. asymptotically efficient, and
4. normally distributed.

According to Raykov and Marcoulides (2000), SEM is used in many scientific fields of study, including biology, economics, educational research, medical research, social and behavioral sciences. Similarly, prominent researchers in the field of HRM have used variations of SEM in recent studies (Glisson & Martin, 1980; Lee & Mitchell, 1994; Lee, Mitchell, Wise, & Fireman, 1996).

The evaluation of the hypothesized model in the current study was carried out on the basis of inferential goodness-of-fit (chi-square value) as well as other descriptive indices. The chi-square represents a test statistic of the goodness of the fit of the model (Raykov & Marcoulides, 2000). The goodness-of-fit index (GFI) was considered a measure of the proportion of variance and covariance explained in the hypothesized model.

Thus, the model offered, at best, a reasonable explanation of trends in the data.

Concluding Remarks

Chapter III has provided a synopsis of the plausibility of hypothetical assertions about potential interrelations among the constructs, as well as their relationships to the indicators or measures assessing them. The questionnaires that represent the constructs have been described. All items have been found appropriate for use in the present research. Results of the analytical procedures used to create reliable and valid items for the constructs in the model have also been presented. Based on these analyses, both the independent and the dependent variables have been operationalized. Four independent variables, along with three dependent variable measures, form the basis for analyses conducted at the DMU level for nonprofits. Next, Chapter IV presents the results of the data analysis, descriptive statistics (means and standard deviations), covariance matrix, a goodness-of-fit summary, and parameter estimates for the independent and dependent variables.

CHAPTER IV

ANALYSIS AND PRESENTATION OF FINDINGS

*"Though this be madness; Yet there is method in it."
William Shakespeare*

This chapter presents the results of the mail survey. A discussion of the survey, including data acquisition methods and data sources, begins the chapter. The sample characteristics are then presented, followed by an explanation of the unit of analysis as well as aggregation. Next, data conditioning is followed by a discussion of validity and reliability checks. The structural equation model is presented along with the raw data. The chapter concludes with statistical hypothesis test results.

Data Acquisition

The main purpose of this study was to examine the impact of human resource management on organizational performance in nonprofit organizations. Questionnaire packets including a cover letter went to the human resource manager (HR manager), executive director, or office manager of 400 nonprofit organizations in the Washington, DC metropolitan area. In organizations lacking these positions, the packet was sent to the president of the company. Specifically, the respondents were asked to evaluate several human resource practices used within their work unit. Next, they were asked to meet with the researcher regarding solicitation of employee volunteers to

complete the employee human capital survey. A self-addressed postage-paid return envelope was included with each packet. A week after the initial mailing, a follow-up phone call was made to the potential respondents.

The questionnaire packets were mailed in eight weekly batches of 50 beginning January 6, 2005 for eight consecutive weeks and included a target date to respond. Responses were obtained until May 8, 2005.

The questionnaires were sent to HR managers for two reasons. First and foremost, these individuals have the greatest access to data related to human resource management activities. Second, they have the largest storehouse of knowledge about the overall activities of the organization at the macro level, as opposed to the narrow departmental level. However, there is the perception that respondents who have direct responsibility for the implementation of human resource policies will make a subjective evaluation of those policies. Following Becker and Gerhart (1996) most of the questions dealt with raw data regarding human resource activities. The results of previous studies have indicated that the responses of senior human resource managers to questions regarding descriptive data are not much different from those of senior line managers (Harel & Trafrir, 1999).

Data Sources

Two reputable databases containing information on U.S. nonprofit organizations—the 2003-2004 directory of the 'Non Profits Times' (NPT) and the database of the National Center for Charitable Statistics (NCCS)—were used to compile the list of the 400 nonprofit organizations that met the criteria of \$10 million revenues in 2003 and/or 25 or more employees. These databases were used because they both contain information for 501(c)(3) public-serving nonprofit organizations obtained from the Internal Revenue Service (IRS) database.

The NCCS database is recognized for data authenticity and is maintained by the Center on Nonprofits and Philanthropy. The NPT is a leading publication for nonprofit management. Since these two entities are recognized in the nonprofit literature (Rose-Ackerman, 1996) as leading authorities, they were used to select organizations for this study.

A master list was compiled of 400 nonprofit organizations that had at least 25 employees or \$10 million in revenues. For each organization, the list included a participation code (PC) (a three digit number; 001-400), the type of organization, an address, the name of organization, a contact name with contact information (i.e. phone and email address), the date that the survey was mailed, and a section for comments. The comment

section was useful for recording pertinent information regarding phone conversations.

The HR manager survey was given a PC that corresponded to the name of the organization on the master list. Subsequently, the five employee surveys for that particular organization were numbered PC01-05. For example, the HR manager survey was pre-coded COC289 with COC identifying the name of the organization and 289 indicating the numeric ranking order of the organization. Next, the five employee surveys were coded COC28901, COC28902, COC28903, COC28904, and COC28905, respectively. Such coding served two purposes. First, the code identified respondents so that nonrespondents could be more effectively followed-up. Next, entering the data into SPSS was expedited, and the likelihood of contamination the data was reduced.

After receiving an HR manager questionnaire, the researcher scheduled a meeting with the HR manager to explore the best options of obtaining data on human capital, a process that required the participation of five core employees. Normally, the HR manager would use the company's email to mass communicate to employees the purpose of the research, the confidential statement, the researcher's name and email address, and the date on which the was to be on site to collect the data.

Sample Characteristics

Originally, there were 91 completed HR manager surveys. Of these, seven cases were removed from the data file and excluded from the analysis. Cases were removed when the HR manager refused to allow employees to complete the human capital survey. Thus, 84 of the 400 designated organizations had surveys returned by the HR manager, resulting in a response rate of 21%. Associated with these organizations were 420 surveys from employees. This response rate is similar to that obtained in previous studies in this field, as reviewed by Becker and Huselid (1998). Figure 2 depicts the data's characteristics.

Distribution of Data Sources^a

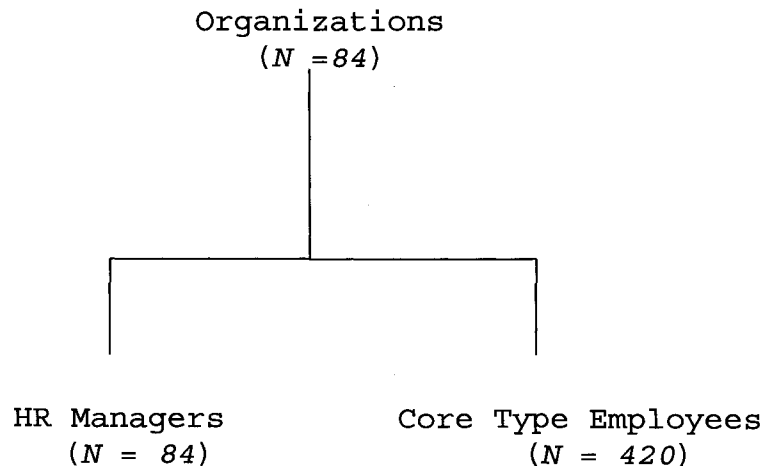


Figure 2. ^a A case was considered valid if the organization allowed participation of both the HR manager and core type employees.

As for the remaining 309 potential respondents 243 indicated that they were unwilling to participate, 60 did not

respond to the initial mailing or the follow-up phone call, and six surveys were returned because the addressee had left the organization and the new incumbent was reluctant to complete the survey.

Control Variable

Because firm size may influence strategy and may be associated with the use of more "sophisticated" SHRM practices (Huselid, Jackson, & Schuler, 1997) it was included in the analysis as a control variable. A number of variables were available to account for size, however as this study was concerned with human resources practices, the number of employees seemed most appropriate (Datta, Guthrie, & Wright, 2003). Therefore, size was operationalized as the natural logarithm of the number of employees (Huselid, 1995). Descriptive statistics are exhibited in Table 10.

Table 10 Descriptive Statistics

| | <i>Frequency</i> | <i>Mean</i> | <i>SD</i> | <i>Range</i> |
|----------------------------------|------------------|-------------|-----------|--------------|
| Core Employees (<i>n</i> = 420) | | | | |
| Yrs Exp in organization | | 8.66 | 7.51 | 1 - 43 |
| Yrs Exp in industry | | 13.26 | 9.45 | 1 - 50 |
| Yrs Exp in position | | 5.90 | 5.26 | 1 - 34 |
| Age* | | 3.40 | 1.06 | 2 - 5 |
| Degree** | | 2.30 | 1.12 | 0 - 4 |
| Yrs of Education | | 5.35 | 2.90 | 0 - 20 |
| Size | | 2.47 | .56 | 2 - 4.7 |
| Male | 155 | | | |
| Female | 265 | | | |
| Nonprofit Type (<i>n</i> = 84) | | | | |
| Religious | 6 | | | |
| Educational | 13 | | | |
| Cultural | 1 | | | |
| Publishing | 4 | | | |
| Health Services | 17 | | | |
| Scientific Research | 5 | | | |
| Professional Assoc. | 3 | | | |
| Employee Membership | 5 | | | |
| Community Centers | 2 | | | |
| Youth Activities | 4 | | | |
| Housing Activities | 4 | | | |
| Political | 1 | | | |
| Activities | | | | |
| Public Policy | 3 | | | |
| Family Activities | 11 | | | |
| Provide Grants | 1 | | | |
| Humanitarian | 5 | | | |

* Age: 2 = 20-29, 3 = 30-39, 4 = 40-49, 5 = 50+

**Degree: 0 = no degree, 1 = Associate, 2 = Bachelor, 3 = Master, 4 = Terminal

The sample represented a variety of organization types that reflected the diversity of the nonprofit sector in the Washington, DC metropolitan area. Organizations in educational

activities (15%), health services (20%), and family activities (13%) accounted for about 48% of the respondents. The average age of the core employees was 34, and females significantly outnumbered males. A bachelor's degree was the highest degree held by most core employees.

Intra-Organizational Variance

In an effort to determine the amount of intra-organizational variance among nonprofit organizations performing services (type of output) within the same activity code, a one-way ANOVA was conducted. The analysis indicated no significant variance between organizations ($F_{(15, 69)} = .773, p < .702$). The result of the ANOVA is presented in Table 11.

Table 11 One-Way of Analysis of Output Type by Activity Code

| Source | | <u>df</u> | <u>SS</u> | <u>MS</u> | <u>F</u> | <u>p</u> |
|--------|---------------|-----------|-----------|-----------|----------|----------|
| Output | Between Group | 15 | 11.404 | .760 | .773* | .702 |
| Type | Within Group | 69 | 67.843 | .983 | | |
| | Total | 84 | 79.247 | | | |

*P < .05

Units of Analysis

Although strategic human resource management practices measured through individual perceptions, the appropriate unit of analysis was the organization level or the organizational

decision making unit (DMU). Organizational performance was the collective effort of all employees in the organization performing at optimal levels. Hence, organizational performance was the organizational construct.

Data for the two workforce characteristics (human capital and intention to leave) were collected from core employees, while data regarding SHRM practices were collected from HR managers; this created some aggregation issues. To obtain scores at the appropriate unit of analysis, it was thus necessary to aggregate individual core employees' scores at the organizational level. It has been suggested (James, 1982; Bliese & Halverson, 1998) that consensus among respondents is justification for aggregation.

Aggregation

There are several reasons to expect that a degree of consensus might exist at the DMU level. First, core employees within the DMU interact with each other. Furthermore, core type employees attend meetings at the DMU level, and key events for employees, such as annual pay awards and major social events, are coordinated at the DMU level. Second, a fundamental axiom in the social sciences is that people can and do exert a strong influence on each other's beliefs, attitudes, and behaviors (Turner, 1991). As Gelade and Ivery (2003) demonstrated, learning whether one's beliefs are or are not commonly shared

with others indeed influences one's attitudes, behaviors, and the strength of the attitude-behavior relationship. Furthermore, interactions among core type employees and senior management provide an environment for consensus regarding job-related opinions and beliefs within a DMU.

Following Glick (1985), intra-class correlation (ICC 1 & 2) was used to determine whether it is appropriate to aggregate intent to leave measures to the organizational level. The ICC furnishes a point estimate of inter-rater reliability, and is interpreted as the reliability of a single rating measurement (James, 1982). Cohen, Cohen, West, and Aiken (2003) postulated that the ICC measures the degree of clustering or the correlation among a set of observations. The ICC ranges from zero for complete independence to one for complete dependence (Cohen et al. 2003). James (1982) stipulated that the ICC(1) could be used as an indicator of agreement between subjects within the same organization. The formula for the ICC(1) is based upon a one-way random effects ANOVA, and is provided below:

$$ICC(1) = MS_B - MS_W / [MS_B + (N_G - 1) * MS_W]$$

In the equation, MS_B is the Between-group Mean Square, MS_W is the Within-group Mean Square, and N_G is the group size.

Whereas, the ICC(2) can be used to determine whether organizations reliably differentiate between perceptions of a

particular variable. In other words, the ICC(2) pertains to reliability of means and not necessarily to agreement among individuals. James (1982) posited the formula for the ICC(2) as follows:

$$ICC(2) = N_G * [ICC(1)] / [1 + (N_G - 1) * ICC(1)]$$

The intraclass correlations for the intent to leave measures are presented in Table 12. This statistic was employed as the primary basis for deciding whether to aggregate the measures at the organizational level of analysis.

Table 12 Intraclass Correlation Coefficient

| One-way Random Effect Model | ICC1 | ICC2 | Alpha |
|--|------|------|-------|
| Single Measure Intraclass Correlation | .42 | | |
| Average Measure Intraclass Correlation | | .74 | |
| Reliability Coefficient | | | .86 |
| N of cases = 84 | | | |
| N of items = 4 | | | |

Dependency or clustering was expected among employees within the same organization. In other words, the scores of employees within the same organization were more similar in value than would be expected in a random sample of organizations. A criterion for aggregating is that ICC(1) should be above .05, regardless of the ICC(2) range (James, 1982). Thus,

the scores were aggregated to the organizational level of analysis.

Data Conditioning

As there were 29 statements representing the four SHRM constructs (acquisition, training, retention, and internal labor markets), factor analysis was conducted to reduce the number of statements to a more manageable set. Internal consistency of all scales was then assessed using Cronbach's reliability alpha. After the surveys were collected and the data were keyed into SPSS, the construct validity of the scale items was checked using exploratory factor analysis. In practice, construct validity is the degree to which a measure relates to other variables as expected within a system of theoretical relationships (Babbie, 2001). As a measure of validity, this check was performed to ensure that the indicators of the constructs adequately measured the concepts of training, retention, training, intent to leave, and perceived organizational performance.

Exploratory Factor Analysis Results

As discussed, the SHRM configuration covers 29 items. The data were analyzed by means of a principal component analysis, with varimax rotation. The Kaiser-Meyer-Olkin measure of sampling (KMO) and Bartlett's test of sphericity were used to determine whether factorability was feasible. The KMO measure of

sampling adequacy determined the amount of variance within the data that could be explained by the factors. As a measure of factorability, a KMO value of 0.6 and above is acceptable (Brace, Kemp, & Snelgar, 2003). The KMO of 0.687 met the criteria. Additionally, the Bartlett's test of $p < 0.05$ indicated that the data were factorable. Thus, three components (comprising nine items) with eigenvalues of greater than 1.0 were found. This criterion is in line with Kaiser's rule, which states that only factors with eigenvalues greater than 1.0 are significant for analytical purposes (Brace, Kemp, & Snelgar, 2003).

These three factors can be thought of as representative of SHRM configurations. Thus, the factor analysis results confirmed the theoretical factor structure. Moreover, they explained 74.84% of the total variance. More details, including eigenvalues, are presented in Table 13.

Table 13

Factor Analysis of Strategic Human Resource Management Variables

| Questionnaire Item | Factor Loading | | |
|--|----------------|-------------|-------------|
| | Factor 1 | Factor 2 | Factor 3 |
| T2: How much priority was placed on training | .838 | | |
| T3: Different type of training | .906 | | |
| T6: Hours of formal training | .909 | | |
| R3: Relaxed dress code | | .753 | |
| R4: Flexible work schedule | | .826 | |
| R5: Telecommute | | .835 | |
| I2: Continued employment low | | | .869 |
| I3: Talk about quitting | | | .816 |
| I4: Look for new job this year | | | .928 |
| Eigenvalue | 2.681 | 2.089 | 1.948 |
| Percentage of variance explained | 29.77 | 23.20 | 21.65 |

Extraction Method: Principal Component Analysis
 Rotation Method: Varimax with Kaiser Normalization

Multidimensionality

Questions for the following constructs were excised from the dataset because they did not load on a particular factor due to multidimensionality, which demonstrates invalidity for the scale items.

Training:

T1: How extensive is the training program?

T4: Is there much formality in the training process?

T5: How much money is spent on training programs?

Retention:

R1: We select individuals who believe in our core values.

R2: We involve many employees in the selection process.

R6: Our organization frequently celebrates successes.

R7: We sponsor outside activities.

Perceived Organizational Performance:

P1: The quality of products

Intent to Leave

I1: A coworker will leave

The acquisition and internal labor market constructs were discarded because all of the variables that were supposed to measure those factors did not load together. These constructs presented multidimensional scaling loading, as the items try to load on several components. Multidimensional scaling provides representation of a pattern of proximities (i.e., similarities) among a set of objects (Kruskal & Wish, 1978). As these constructs did not exhibit discriminant validity or explain a significant portion of the variance in the data, they were dropped from the study.

The intercorrelation matrices for the scales used in the analysis are shown in Table 14. As shown by the matrix, human capital (work experience and education) is positively associated with perceived organizational performance. Second, a retention strategy is associated with lower levels of intent to leave. Finally, the results provide additional evidence of the influence of SHRM factors on organizational performance.

Table 14 Intercorrelation Matrix of Variables

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------------------------|-------|-------|------|------|------|-----|----|
| 1. Training | -- | | | | | | |
| 2. Retention | .09 | -- | | | | | |
| 3. Intent to Leave | .17 | -.04 | -- | | | | |
| 4. Work Experience | .22* | .08 | -.18 | -- | | | |
| 5. Education | .38** | -.06 | -.12 | .28* | -- | | |
| 6. Perceived Performance | .31* | .36** | -.09 | -.17 | -.01 | -- | |
| 7. Size | .07 | -.05 | -.13 | .09 | .23* | .00 | -- |

Note. $N = 84$.

* $p < .05$. ** $p < .01$

Reliability of Scale Items

Following the factor analysis, the internal consistency of all scales was assessed using Cronbach's reliability alpha. This measure of reliability ranges from zero to one, with values of .60 to .70 deemed the lower limit of acceptability (Hair,

Anderson, Tatham, & Black, 1998). The reliability alphas for the scales are presented in Table 15.

Table 15 Reliability for All Scales

| Sample | Item | Sample Item | Sample Size | Alpha |
|-----------------------|------|--|-------------|-------|
| Training | 3 | How much priority is placed on training? | 84 | .87 |
| Retention | 3 | We allow employees to work flexible schedules. | 84 | .73 |
| Intention | 3 | I will look for a new job this year. | 84 | .85 |
| Perceived Performance | 3 | The quality of programs | 84 | .78 |

Structural Equation Model

Since two constructs (Acquisition and Internal labor market) were dropped from the original model (see Figure 1), modifications were necessary. The most common reason for model modification is that the fit of the original model is not good (Raykov & Marcoulides, 2000). Following Diamantopoulos and Siguaw (2000), a specification search was performed that

correctly identified the network of relations among the manifest variables and latent variables in the population. As Raykov and Marcoulides (2000) suggested, an interval step process was used, in which one predictor at a time was dropped from the equation. The objective was to detect and correct errors between the proposed model and the true model characterizing the population and variables in the study. Consequently, the original research model (see Figure 1) for strategic human resource management was disconfirmed.

AMOS 5.0 was again used to analyze the data through structural equation modeling (SEM). The new strategic human resource management model demarcated into two submodels: a revised hypothesized research model and a structural (fitted) model. The revised model is the result of the data where two constructs acquisition, and internal labor market and several questions were excised from the study. Consequently, the revised hypothesized model described how each variable (i.e., retention, training, human capital, intent to leave, and perceived organizational performance) was measured or operationalized. The revised hypothesized research model is presented in Figure 3.

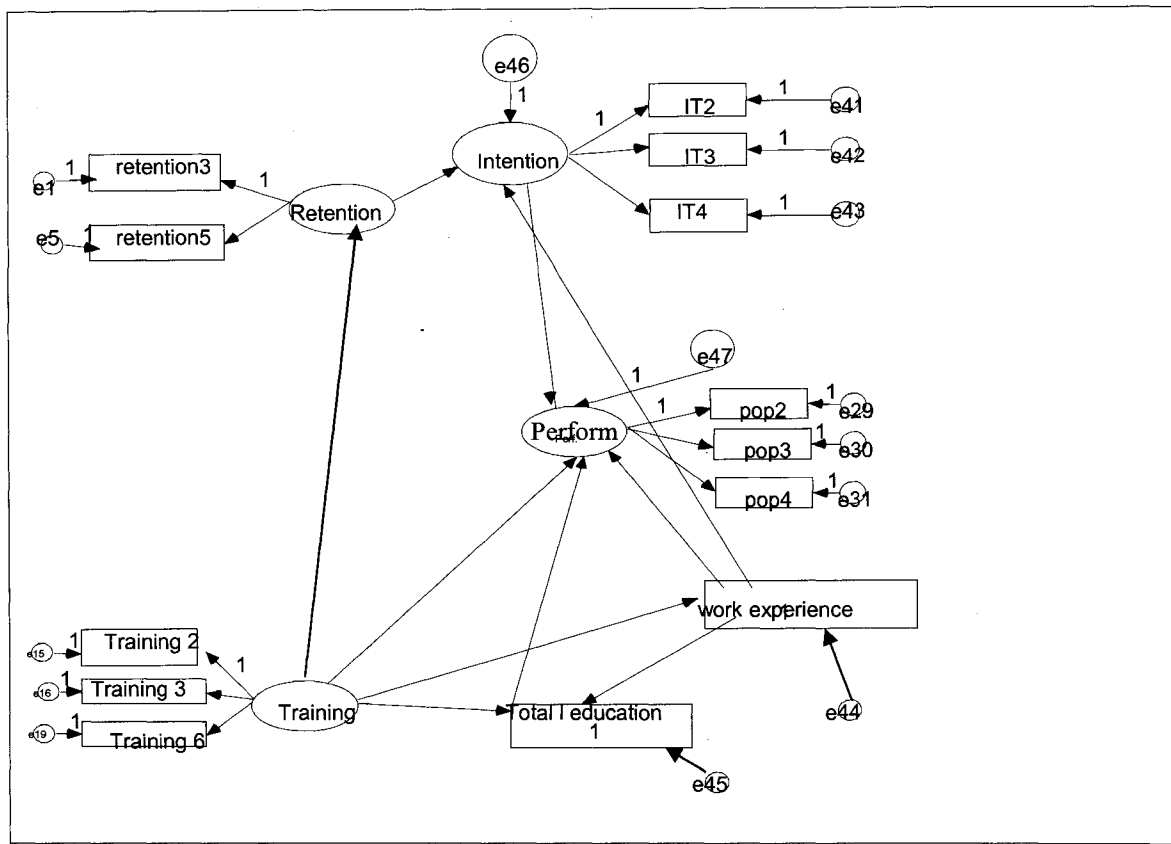


Figure 3 Revised Hypothesized Model: Strategic human resource management influence intent, human capital, and perceived organizational performance.

A more formal description of the model presented in Figure 3 hypothesized a priori that

1. SHRM could be explained by four factors: retention, training, intent to leave, and human capital (education and work experience).
2. Each item measure would have a nonzero loading on the SHRM factor that it was designed to measure (termed *target loading*), and a zero loading on all other factors (termed *nontarget loading*).

3. The four SHRM factors, consistent with the Resource-base view of the firm theory, are correlated.
4. The error associated with each measure would be uncorrelated.

Structural (Fitted) Model

In contrast, the structural model specified the relationships between each of the variables (i.e., retention, training, intent to leave, and perceived organizational performance) and indicated the amount of unexplained variance. Parameter estimates from the structural model were used to test the hypotheses. Figure 4 presents the structural model along with the regression weights.

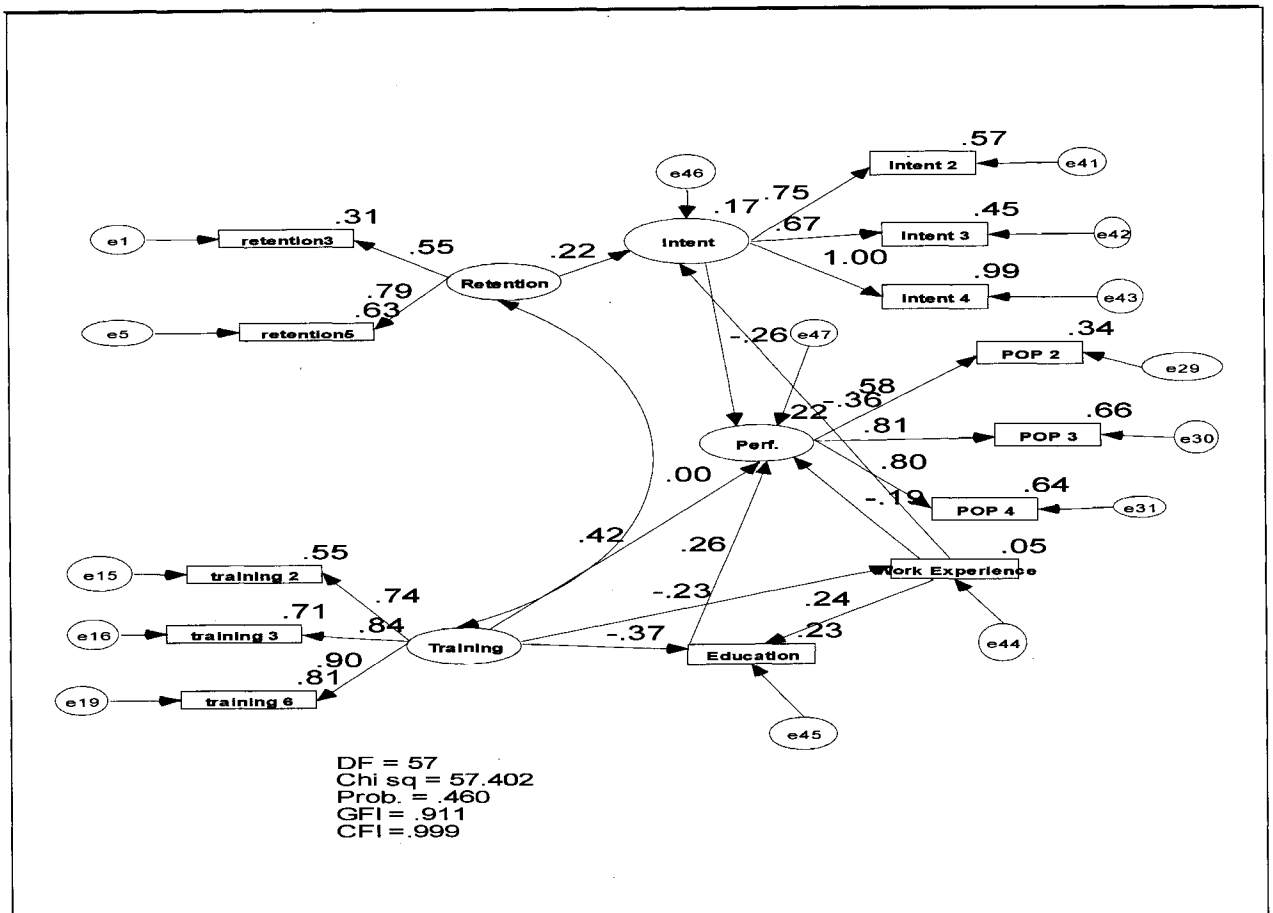


Figure 4. Structural model: Regression weights for strategic human resource management and perceived organizational performance variables.

Statistical Hypotheses Test Results

The hypotheses were tested using the parameter estimates from the structural model. Table 15 provides the results of the parameter estimates. Both the chi-square and degree of freedom (*df*) indicated that the model represented a reasonably good approximation of the data. The *p* value suggested no significant difference between the sample and model covariance matrices. The

goodness-of-fit index (GFI) is loosely considered to be the measure of the proportion of the variance and covariance that a proposed model is able to explain. As a guide, models with a GFI in the mid .90s or above are considered a reasonable fit (Raykov & Marcoulides, 2000).

Steiger and Lind (1980) suggested alternative fit indices to determine whether the proposed model fits the data based on noncentrality. The comparative-fit index (CFI) compared the proposed model with the null model assuming no relationships exist between the measures (Bentler, 1990). Thus, values of CFI in the mid .90s and above are considered a good approximation of the model (Diamantopoulos & Siguaaw, 2000).

Table 16 Results of the Structural Equation Model

| Variable: | Beta | t-value | p |
|------------|--------|---------|------|
| Retention | .605* | 1.595 | .111 |
| Intention | -.063* | -2.028 | .043 |
| Training | .222** | 2.687 | .007 |
| Education | .063* | 1.926 | .054 |
| Experience | -.024 | -1.492 | .136 |

Chi-square = 57.402

Degree of freedom = 57

GFI = .911

CFI = .999

*P < .05

**P < .01

In plausible models the null hypothesis is rejected with t -value greater than +2 or less than -2 at the significance level (e.g., a t -value of -3.229, the null is rejected at a significance level of .05).

Hypothesis 1 stated that an acquisition configuration that includes HR planning, extensive recruitment, and rigorous selection and screening would be positively associated with higher levels of human capital. This hypothesis was not tested. The acquisition construct was discarded from the study primarily because the construct did not exhibit discriminant validity or explain a significant portion of the variance in the data.

Hypothesis 2 predicted that extensive training practice would be positively correlated with perceived organizational performance. The multivariate effect (t -value = 2.687, p -value = .007) was significant. Therefore, hypothesis 2 was supported.

Hypothesis 3 stated that an internal labor market would be positively correlated with higher levels of human capital. This hypothesis was not tested. The internal labor market construct was discarded from the study primarily because the construct did not exhibit discriminant validity or explain a significant portion of the variance in the data.

Hypothesis 4 predicted that a retention configuration would significantly reduce employees' intention to leave. The

multivariate effect (t -value = 1.595, p -value = .111) was not significant. Therefore, the null hypothesis was accepted.

Hypothesis 5a predicted that higher level of human capital (education) would be positively correlated with perceived organizational performance. Contrary to this prediction, human capital (education) (t -value = 1.926, p -value = .054) was not a significant indicator of perceived organizational performance. Therefore, hypothesis 5a was not supported.

Hypothesis 5b stated that higher level of human capital (work experience) would be positively correlated with organizational performance. The multivariate effect on human capital (work experience) (t -value = -1.492, p -value = .136) was not a significant indicator of perceived organizational performance. Hypothesis 5b was therefore not supported.

Hypothesis 6 predicted that lower levels of employees' intent to leave would be correlated with organizational performance. As predicted, the multivariate effect of employees' intent to leave (t -value = -2.028, p -value = .043) was a significant indicator of perceived organizational performance. Therefore, hypothesis 6 was supported.

In review, the model presented a reasonably good approximation of the population data based on both the GFI and CFI indices. The results of the hypotheses are summarized in Table 17.

Table 17 Summary of Hypotheses

| Hypothesis | Result | Explanation |
|---------------|---------------|---|
| Hypothesis 1 | Not Tested | Dropped from the study. |
| Hypothesis 2 | Supported | An extensive training configuration is a predictor of organizational performance. |
| Hypothesis 3 | Not Tested | Dropped from the study. |
| Hypothesis 4 | Not Supported | A retention configuration that incorporates merely intangible attributes is not significant indicator of employees' intentions to leave a nonprofit organization. |
| Hypothesis 5a | Not Supported | Human capital in terms of level of education is not an indicator of perceived organizational performance. |
| Hypothesis 5b | Not Supported | Work experience as related to human capital is not an indicator of perceived organizational performance. |
| Hypothesis 6 | Supported | Employee intention to leave the organization is a predictor of perceived organizational performance. |

Data Reporting

The desirability of full raw data reporting was taken into consideration. Thus, the raw data for this study are reported in Appendix L. As aforementioned, all data were loaded into SPSS. The AMOS output and parameter estimates are shown in Table 18.

Concluding Remarks

This chapter has provided the results of the structural equation model. First, data acquisition methods were explained; the data sources were then identified. Next, the characteristics of the sample were presented and discussed, followed by an explanation of the unit of analysis. As the data were collected from multiple sources in the organization, it was necessary to discuss aggregating individual core employees' scores to the organizational level. Descriptions of validity and reliability considerations were followed by data reporting. Finally, the results of the statistical hypothesis tests were presented. Discussion, limitations, implications, and conclusions related to the present study are presented in Chapter V.

CHAPTER V

DISCUSSION AND CONCLUSIONS

"Wisdom can only be planted, nurtured, and harvested; it cannot be manufactured." Kim Brouwmeester

This chapter begins with an overview of the research and then presents a summary of the results. Next, a discussion regarding the limitations of the study is presented. In the penultimate section, attention is given to information that was gained from the study with respect to conceptual and practical implications. The chapter concludes with a discussion related to future implications.

Overview of the Research

While the extant human resource literature is replete with studies that have contributed to understanding strategic human resource management issues (Huselid, 1995; Bae & Lawler, 2000; Inchniowski, 1997; Lado & Wilson, 1994; Boxall & Steeneveld, 1999), several problems still exist, as most of those studies were based on large, established for-profit organizations. Thus, broadening the literature requires expanding strategic human resource management research with more diverse samples. Nonprofit organizations present a unique opportunity for expanding the literature and broadening understanding of strategic human resource management.

The purpose of this research was to examine empirically how certain strategic human resource management configurations affect the perception of organizational performance. More specifically, these configurations include retention, training, human capital (work experience and education), and employee intention to leave the organization. These dimensions were examined in nonprofit organizations in the Washington, DC metropolitan area. Hence, this study departed from previous research by examining the antecedents of strategic human resource management in the nonprofit sector. In the current study, the researcher's confidence in the results is bolstered by the data obtained from the NCCS database, which is a national equiprobability sample of a wide variety of nonprofit organizations.

Summary of Results

The data should serve to expand the notion that strategic human resource management should be viewed as a valuable asset that may significantly impact organizational performance as hinted by the resource-based view of the firm (Barney, 1996; Wright, Dunford, Snell, 2001).

The current research addressed the need to examine strategic human resource management configurations in order to assess whether human capital affects organizational performance. Should nonprofit organizations focus on hiring practices,

education, or work experience? Should they develop retention strategies that have more extrinsic appeal? Human capital (work experience and education), retention (the ability to retain valuable human capital), and training are all thought to influence the perception of organizational performance.

The research provided some interesting insights. The data did not support the assertion that either measure for human capital (i.e., work experience and education level) directly enhances firm performance, contrary to hypotheses 5a and 5b. In this respect, the data were aligned with those of other studies (Hitt et al 2001; Myers, Griffith, & Daugherty, 2004) that found that neither experience nor education was a predictor of perceived organizational performance. Myers et al (2004) suggested that perhaps education and work history represent minimum or threshold-level requirements.

However, optimizing training activities and minimizing employee turnover appear to be good predictors of organizational performance. These findings have important managerial implications related to screening and hiring of potential employees.

Obviously, the implication of these findings is not that education and work history are unimportant. Rather, they may indicate that a training configuration is a form of "best

practice" as posited by Pfeffer (1994) and supported by the empirical findings of Delaney and Huselid (1996).

NPOs often compete on competencies, the core sets of knowledge and expertise that give them a competitive advantage over their competitors (Bohlander & Snell, 2004). This finding suggests that a training configuration can be considered an element of the first stage of attaining competitive advantage as proposed by Barney (1991) in his resource-based view of the firm. As predicted, investments made in effective training programs that nurture and strengthen these competencies were shown to be related to perceptual measures of organizational performance. In other words, effective training programs can overcome what might have traditionally been considered deficiencies (i.e., lack of formal education and/or work experience).

While the data did not show that greater use of a retention configuration that primarily focuses on extrinsic values is a predictor of employee intent to leave, they did support the notion that lower levels of employee turnover are significantly related to perceived organizational performance. As Huselid (1995) argued, firms can improve organizational performance by minimizing employee turnover.

Most unexpected is the finding that a retention configuration that is extrinsically focuses does not negatively

impact employees' intention to leave. The following explanation may be suggested for this surprising finding. While enticements such as telecommuting are mostly associated with improvement in working conditions that can promote career success, they are often used as retention determinant (Igbaria & Guimaraes, 1999). As suggested by Goulet and Frank (2002), for-profit employees are generally more committed to their careers, while nonprofit employees are more committed to their organizations. Therefore, a retention determinant focused on career enhancement would not be as appealing to an employee of a nonprofit organization. While the data did not provide support for an extrinsically focused retention configuration, they provided some evidence that common areas (of both extrinsic and intrinsic) affect employee retention.

The sample of this study included organizations such as hospitals, universities, research facilities, and psychological advocates (e.g., family crisis centers), in which workers are concerned with the spiritual, educational, social, medical, legal, cultural, and leisure needs of citizenry. As a whole, many of the employees in these organizations are faced with different stressors than may be found in for-profit organizations. For example, common among core type employees in NPOs are burnout, poor working conditions, poor pay, minimal administrative support, and inadequate resources to do the job.

Hence, the retention measures found in previous studies that examined this phenomenon in for-profit firms (Collins, 2000), were inadequate for measuring retention with NPOs.

Limitations

As with all survey research, certain limitations must be acknowledged when attempting to make generalizations from the results. Several limitations suggest that the assessments presented in the present study should be viewed cautiously. First, the NCCS data required reliance on perceptual measures of organizational performance. Although financial measures of firm performance are more desirable, perceptual measures are regularly used in research, and the results that were found in the present study are generally consistent with the findings of studies that used objective performance measures (cf. Huselid, 1995). More importantly, the use of these measures allowed the assessment of impact on SHRM practices in organizations for which financial measures of performance are generally unavailable (e.g., churches).

Second, the retention measure was operationalized using three-item scales. Future research should focus on the development of a more comprehensive measure for retaining employees in the nonprofit sector. It has further been suggested that the nonprofit is unique, given that employees in this

particular sector are generally more committed to the organization than to their careers (Goulet & Frank, 2002).

Third, as with all studies, there are other possible variables that were not examined and may have exogenous effects on the relationships studied. In particular, culturally compatible human resource strategies (Greene, 1995) and social capital (Pennings, Lee, & Witteloostuijn, 1998) have been cited as essential competencies for competition and performance in the nonprofit sector. Future research should explore the effect of social capital and culturally compatible HR strategies and the relationship between these two factors and HR configurations.

Fourth, core employee data were collected from a few employees within each organization. This sample may not truly represent the sentiments of a larger set of core employees within the organization.

Strengths of the Research

Data limitations aside, this study suggested two main observations. First, limiting the focus to NPOs allowed the researcher to examine the SHRM process at the level of the decision-making unit, which is important for firm survival. Presumably, firms compete for human capital (i.e., the knowledge and skills of core employees that can be used to produce professional services). Then, as Pennings, Lee, and Witteloostuijn (1998) suggested, a study of this process should

yield the greatest insights. Further, the variance in the sample in terms of activity codes suggests that the results should generalize to other types of NPOs that face similar environmental turbulence.

Second, the current study was able to reach statistically logical conclusions with confidence through the use of structural equation modeling. The study gave support to the specific directions of causation as in the cases of hypotheses 2 and 6. These findings were in alignment with other findings in the extant human resource literature. However, some of the specific directions of causation were not supported, as in the cases of hypotheses 4, 5a, and 5b. The measurements for this study's concepts were fully adequate, as the hypothesized SEM model was supported with operationalized constructs and was validated and checked for reliability.

Conceptual Implications

This study provided a unique framework, model, survey instrument, and empirical analysis to measure the relationships among the constructs of retention configuration, training configuration, intent to leave, human capital (work experience and education), and perceived organizational performance.

Empirical results of the current study provide evidence that certain SHRM practices have an impact on perceived organizational performance. Configurations of human resource

practices that include an effective training program have a positive impact on perceived organizational performance. The reader should have an understanding that an appropriate training program can develop firm-specific human capital. As suggested by the RBV of the firm, an organization's unique human capital and capabilities provide the basis for competitive advantage.

Readers gain from this study an all-in-one model and methodology for testing the relationships among the antecedents and consequences of SHRM. The uniqueness of this study rests in the fact that it offers a methodology for examining a new combination of constructs arranged in a specific pattern.

The research goals of this study were met, as a hypothesized structural equation model was developed based on the resource-based view of the firm theory and was empirically tested. The SEM model was tested using AMOS software, which determined the strength and direction of causation among the constructs.

These ideas and contributions are special, since a newly developed model was added to the SHRM literature. Finally, this study is one of the first SHRM studies to test a mediator (intent to leave) of the relationship between human resource practices and perceived organizational performance. While many researchers have proposed that SHRM practices lead to performance through workforce characteristics, most only test

the direct relationship between human resource and performance. Most researchers have not tested the proposed mediator because data on intention to leave are almost impossible to obtain pragmatically (Becker & Gerhart, 1996). Therefore, the present study significantly contributes to the SHRM literature by exerting the effort to collect this data.

This study raised the issue that there are more complex relationships among the antecedents and consequences of intention to leave and retention than were expected or found in past studies. Practical implications of the current study are explored in the following section.

Practical Implications

These results, as they relate to employee retention and intention to leave, have important implications for human resource practitioners. During the last decade, it has become abundantly clear that organizations face challenges related to retention (Gordon & Lowe, 2002). Are there early warning indicators to alert organizations that employees are about to walk off the job? The answer is this: Not in all cases.

Nonprofit organizations in today's complex business community are so competitive and structured that it is often not recognized that employee retention represents strength (Gordon & Lowe, 2002). First, as retention strategies are developed, the

HR practitioners must recognize that a combination of intrinsic and extrinsic values affects employee retention.

Second, it is imperative for HR practitioners to find out what factors motivate employees and use these factors as retention determinant. A newly introduced concept that has been useful in the discussion of employee retention is that of the psychological contract, which refers to the unwritten expectations employees and employers have about the nature of their work relationship (Mathis & Jackson, 2003). This contract encompasses both tangible items (such as wages, benefits, employee productivity, and attendance) and intangible items (such as loyalty, fair treatment, and job security). Generally, the key to employee retention lies in one or more of these attributes.

While there is not a simple formula that can predict an individual's intent to leave, which in most situations does not translate into an immediate action, the consequences as they relate to performance may be as costly as actual turnover. Furthermore, employees who demonstrate high intent to leave may very well be less satisfied with their work and more likely to withdraw from the organization, either occasionally through absenteeism or permanently through turnover. According to separate reports, absenteeism costs an estimated \$600 per employee per year (Anonymous-a, 2000), and the turnover cost of

highly skilled employees averages more than \$10,000 per departure (Anonymous-b, 2000).

Many organizations have found that turnover has a negative impact on organizational performance, as documented by a number of studies (Staw, 1980; Huselid, 1995; Cascio, 2000; Ensman, 2002; Guthrie, 2001). However, the data in the present study show a significant negative relationship between intent to leave and organizational performance. Under no circumstances should the reader conclude that employees' intent to leave is as costly to the organization as actual turnover is. To the contrary, the data suggest that HR practitioners should take a keener look at retention determinants and perhaps job satisfaction.

Future Implications

Future research on SHRM, retention determinants, and intention to leave is needed to fully understand the direction of causality between these concepts. Data should be collected longitudinally to assess how these complex relationships converse over time and to examine whether organizational performance is indeed significantly increased through the mediating mechanism of decreasing the employees' emotional desire to leave the organization. Such research would substantially add to our understanding of how a commitment to human resource management configurations can be used

strategically to increase organizational performance via retention of vital assets-human capital.

Concluding Remarks

This study achieved its intended goal of examining the impact of SHRM on organizational performance based on the resource-based view of the firm. Specifically, the study provided evidence that those configurations of SHRM practices are significantly related to training and employees' intention to leave. Further, these configurations are directly related to the perception of organizational performance. Based on these findings, HR practitioners and scholars should continue to pursue a punctilious approach to understanding the relationship between retention, intention to leave, and organizational performance.

This study also provided a prescriptive model indicating how human resource management configurations can be leveraged strategically to have a significant impact on organizational performance. The findings show that nonprofit organizations can build this strategic capability by deploying effective training strategies and decreasing employees' intention to leave the organization.

Table 18 Amos Output for Study

Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments: 91
 Number of distinct parameters to be estimated: 34
 Degrees of freedom (91 - 34): 57

Result (Default model)

Minimum was achieved
 Chi-square = 57.402
 Degrees of freedom = 57
 Probability level = .460

Estimates (Group number 1 - Default model)

Scalar Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

| | Estimate | S.E. | C.R. | P | Label |
|--------------------------|----------|-------|--------|------|-------|
| WRKEXP <--- Training | -1.012 | .498 | -2.031 | .042 | |
| Turnover <--- Retention | .605 | .379 | 1.595 | .111 | |
| EDU <--- Training | -.803 | .246 | -3.259 | .001 | |
| EDU <--- WRKEXP | .122 | .051 | 2.391 | .017 | |
| Turnover <--- WRKEXP | -.183 | .057 | -3.229 | .001 | |
| Org._Perf. <--- Turnover | -.063 | .031 | -2.028 | .043 | |
| Org._Perf. <--- Training | .222 | .083 | 2.687 | .007 | |
| Org._Perf. <--- EDU | .063 | .033 | 1.926 | .054 | |
| Org._Perf. <--- WRKEXP | -.024 | .016 | -1.492 | .136 | |
| RC3 <--- Retention | 1.000 | | | | |
| RC5 <--- Retention | 1.369 | 1.086 | 1.260 | .208 | |
| TC2 <--- Training | 1.000 | | | | |
| TC3 <--- Training | 1.214 | .162 | 7.476 | *** | |
| TC6 <--- Training | 1.246 | .162 | 7.693 | *** | |
| POP2 <--- Org._Perf. | 1.000 | | | | |
| POP3 <--- Org._Perf. | 1.561 | .320 | 4.882 | *** | |
| POP4 <--- Org._Perf. | 1.701 | .348 | 4.884 | *** | |
| IT2 <--- Turnover | 1.000 | | | | |
| IT3 <--- Turnover | .987 | .153 | 6.457 | *** | |
| IT4 <--- Turnover | 1.679 | .217 | 7.728 | *** | |

Standardized Regression Weights: (Group number 1 - Default model)

| | Estimate |
|--------------------------|----------|
| WRKEXP <--- Training | -.234 |
| Turnover <--- Retention | .217 |
| EDU <--- Training | -.365 |
| EDU <--- WRKEXP | .239 |
| Turnover <--- WRKEXP | -.356 |
| Org._Perf. <--- Turnover | -.262 |
| Org._Perf. <--- Training | .416 |
| Org._Perf. <--- EDU | .260 |
| Org._Perf. <--- WRKEXP | -.194 |
| RC3 <--- Retention | .555 |
| RC5 <--- Retention | .793 |
| TC2 <--- Training | .739 |
| TC3 <--- Training | .843 |
| TC6 <--- Training | .900 |
| POP2 <--- Org._Perf. | .585 |
| POP3 <--- Org._Perf. | .814 |
| POP4 <--- Org._Perf. | .802 |
| IT2 <--- Turnover | .753 |
| IT3 <--- Turnover | .669 |
| IT4 <--- Turnover | .996 |

Covariances: (Group number 1 - Default model)

| | Estimate | S.E. | C.R. | P | Label |
|-------------------------|----------|------|------|------|-------|
| Retention <--> Training | .003 | .084 | .031 | .975 | |

Correlations: (Group number 1 - Default model)

| | Estimate |
|-------------------------|----------|
| Retention <--> Training | .004 |

Variances: (Group number 1 - Default model)

| | Estimate | S.E. | C.R. | P | Label |
|-----------|----------|-------|-------|------|-------|
| Retention | .479 | .413 | 1.160 | .246 | |
| Training | .755 | .200 | 3.772 | *** | |
| e44 | 13.280 | 2.064 | 6.433 | *** | |
| e45 | 2.800 | .442 | 6.339 | *** | |
| e46 | 3.065 | .795 | 3.857 | *** | |
| e47 | .168 | .064 | 2.613 | .009 | |
| e1 | 1.076 | .410 | 2.627 | .009 | |
| e5 | .530 | .706 | .750 | .453 | |
| e15 | .629 | .115 | 5.456 | *** | |
| e16 | .453 | .110 | 4.102 | *** | |
| e19 | .276 | .098 | 2.805 | .005 | |
| e30 | .268 | .084 | 3.171 | .002 | |

| | Estimate | S.E. | C.R. | P | Label |
|-----|----------|------|-------|------|-------|
| e31 | .346 | .103 | 3.374 | *** | |
| e41 | 2.840 | .545 | 5.210 | *** | |
| e42 | 4.459 | .758 | 5.885 | *** | |
| e43 | .086 | .912 | .094 | .925 | |
| e29 | .415 | .073 | 5.706 | *** | |

Squared Multiple Correlations: (Group number 1 - Default model)

| | Estimate |
|-----------|----------|
| WRKEXP | .055 |
| EDU | .231 |
| Turnover | .174 |
| Org_Perf. | .222 |
| IT4 | .992 |
| IT3 | .448 |
| IT2 | .567 |
| POP2 | .342 |
| POP4 | .644 |
| POP3 | .663 |
| TC6 | .809 |
| TC3 | .710 |
| TC2 | .546 |
| RC5 | .629 |
| RC3 | .308 |

Matrices (Group number 1 - Default model)

Total Effects (Group number 1 - Default model)

| | Training | Retention | WRKEXP | EDU | Turnover | Org_Perf. |
|-----------|----------|-----------|--------|------|----------|-----------|
| WRKEXP | -1.012 | .000 | .000 | .000 | .000 | .000 |
| EDU | -.926 | .000 | .122 | .000 | .000 | .000 |
| Turnover | .185 | .605 | -.183 | .000 | .000 | .000 |
| Org_Perf. | .176 | -.038 | -.005 | .063 | -.063 | .000 |
| IT4 | .311 | 1.016 | -.307 | .000 | 1.679 | .000 |
| IT3 | .183 | .597 | -.181 | .000 | .987 | .000 |
| IT2 | .185 | .605 | -.183 | .000 | 1.000 | .000 |
| POP2 | .176 | -.038 | -.005 | .063 | -.063 | 1.000 |
| POP4 | .300 | -.065 | -.008 | .108 | -.107 | 1.701 |
| POP3 | .275 | -.060 | -.007 | .099 | -.099 | 1.561 |
| TC6 | 1.246 | .000 | .000 | .000 | .000 | .000 |
| TC3 | 1.214 | .000 | .000 | .000 | .000 | .000 |
| TC2 | 1.000 | .000 | .000 | .000 | .000 | .000 |
| RC5 | .000 | 1.369 | .000 | .000 | .000 | .000 |
| RC3 | .000 | 1.000 | .000 | .000 | .000 | .000 |

Standardized Total Effects (Group number 1 - Default model)

| | Training | Retention | WRKEXP | EDU | Turnover | Org_Perf. |
|--------|----------|-----------|--------|------|----------|-----------|
| WRKEXP | -.234 | .000 | .000 | .000 | .000 | .000 |

| | Training | Retention | WRKEXP | EDU | Turnover | Org_Perf. |
|-----------|----------|-----------|--------|------|----------|-----------|
| EDU | -.421 | .000 | .239 | .000 | .000 | .000 |
| Turnover | .084 | .217 | -.356 | .000 | .000 | .000 |
| Org_Perf. | .330 | -.057 | -.038 | .260 | -.262 | .000 |
| IT4 | .083 | .216 | -.355 | .000 | .996 | .000 |
| IT3 | .056 | .145 | -.238 | .000 | .669 | .000 |
| IT2 | .063 | .164 | -.268 | .000 | .753 | .000 |
| POP2 | .193 | -.033 | -.022 | .152 | -.153 | .585 |
| POP4 | .264 | -.046 | -.031 | .208 | -.210 | .802 |
| POP3 | .268 | -.046 | -.031 | .212 | -.213 | .814 |
| TC6 | .900 | .000 | .000 | .000 | .000 | .000 |
| TC3 | .843 | .000 | .000 | .000 | .000 | .000 |
| TC2 | .739 | .000 | .000 | .000 | .000 | .000 |
| RC5 | .000 | .793 | .000 | .000 | .000 | .000 |
| RC3 | .000 | .555 | .000 | .000 | .000 | .000 |

Direct Effects (Group number 1 - Default model)

| | Training | Retention | WRKEXP | EDU | Turnover | Org_Perf. |
|-----------|----------|-----------|--------|------|----------|-----------|
| WRKEXP | -1.012 | .000 | .000 | .000 | .000 | .000 |
| EDU | -.803 | .000 | .122 | .000 | .000 | .000 |
| Turnover | .000 | .605 | -.183 | .000 | .000 | .000 |
| Org_Perf. | .222 | .000 | -.024 | .063 | -.063 | .000 |
| IT4 | .000 | .000 | .000 | .000 | 1.679 | .000 |
| IT3 | .000 | .000 | .000 | .000 | .987 | .000 |
| IT2 | .000 | .000 | .000 | .000 | 1.000 | .000 |
| POP2 | .000 | .000 | .000 | .000 | .000 | 1.000 |
| POP4 | .000 | .000 | .000 | .000 | .000 | 1.701 |
| POP3 | .000 | .000 | .000 | .000 | .000 | 1.561 |
| TC6 | 1.246 | .000 | .000 | .000 | .000 | .000 |
| TC3 | 1.214 | .000 | .000 | .000 | .000 | .000 |
| TC2 | 1.000 | .000 | .000 | .000 | .000 | .000 |
| RC5 | .000 | 1.369 | .000 | .000 | .000 | .000 |
| RC3 | .000 | 1.000 | .000 | .000 | .000 | .000 |

Standardized Direct Effects (Group number 1 - Default model)

| | Training | Retention | WRKEXP | EDU | Turnover | Org_Perf. |
|-----------|----------|-----------|--------|------|----------|-----------|
| WRKEXP | -.234 | .000 | .000 | .000 | .000 | .000 |
| EDU | -.365 | .000 | .239 | .000 | .000 | .000 |
| Turnover | .000 | .217 | -.356 | .000 | .000 | .000 |
| Org_Perf. | .416 | .000 | -.194 | .260 | -.262 | .000 |
| IT4 | .000 | .000 | .000 | .000 | .996 | .000 |
| IT3 | .000 | .000 | .000 | .000 | .669 | .000 |
| IT2 | .000 | .000 | .000 | .000 | .753 | .000 |
| POP2 | .000 | .000 | .000 | .000 | .000 | .585 |
| POP4 | .000 | .000 | .000 | .000 | .000 | .802 |
| POP3 | .000 | .000 | .000 | .000 | .000 | .814 |
| TC6 | .900 | .000 | .000 | .000 | .000 | .000 |
| TC3 | .843 | .000 | .000 | .000 | .000 | .000 |

| | Training | Retention | WRKEXP | EDU | Turnover | Org. Perf. |
|-----|----------|-----------|--------|------|----------|------------|
| TC2 | .739 | .000 | .000 | .000 | .000 | .000 |
| RC5 | .000 | .793 | .000 | .000 | .000 | .000 |
| RC3 | .000 | .555 | .000 | .000 | .000 | .000 |

Indirect Effects (Group number 1 - Default model)

| | Training | Retention | WRKEXP | EDU | Turnover | Org. Perf. |
|------------|----------|-----------|--------|------|----------|------------|
| WRKEXP | .000 | .000 | .000 | .000 | .000 | .000 |
| EDU | -.123 | .000 | .000 | .000 | .000 | .000 |
| Turnover | .185 | .000 | .000 | .000 | .000 | .000 |
| Org. Perf. | -.046 | -.038 | .019 | .000 | .000 | .000 |
| IT4 | .311 | 1.016 | -.307 | .000 | .000 | .000 |
| IT3 | .183 | .597 | -.181 | .000 | .000 | .000 |
| IT2 | .185 | .605 | -.183 | .000 | .000 | .000 |
| POP2 | .176 | -.038 | -.005 | .063 | -.063 | .000 |
| POP4 | .300 | -.065 | -.008 | .108 | -.107 | .000 |
| POP3 | .275 | -.060 | -.007 | .099 | -.099 | .000 |
| TC6 | .000 | .000 | .000 | .000 | .000 | .000 |
| TC3 | .000 | .000 | .000 | .000 | .000 | .000 |
| TC2 | .000 | .000 | .000 | .000 | .000 | .000 |
| RC5 | .000 | .000 | .000 | .000 | .000 | .000 |
| RC3 | .000 | .000 | .000 | .000 | .000 | .000 |

Standardized Indirect Effects (Group number 1 - Default model)

| | Training | Retention | WRKEXP | EDU | Turnover | Org. Perf. |
|------------|----------|-----------|--------|------|----------|------------|
| WRKEXP | .000 | .000 | .000 | .000 | .000 | .000 |
| EDU | -.056 | .000 | .000 | .000 | .000 | .000 |
| Turnover | .084 | .000 | .000 | .000 | .000 | .000 |
| Org. Perf. | -.086 | -.057 | .155 | .000 | .000 | .000 |
| IT4 | .083 | .216 | -.355 | .000 | .000 | .000 |
| IT3 | .056 | .145 | -.238 | .000 | .000 | .000 |
| IT2 | .063 | .164 | -.268 | .000 | .000 | .000 |
| POP2 | .193 | -.033 | -.022 | .152 | -.153 | .000 |
| POP4 | .264 | -.046 | -.031 | .208 | -.210 | .000 |
| POP3 | .268 | -.046 | -.031 | .212 | -.213 | .000 |
| TC6 | .000 | .000 | .000 | .000 | .000 | .000 |
| TC3 | .000 | .000 | .000 | .000 | .000 | .000 |
| TC2 | .000 | .000 | .000 | .000 | .000 | .000 |
| RC5 | .000 | .000 | .000 | .000 | .000 | .000 |
| RC3 | .000 | .000 | .000 | .000 | .000 | .000 |

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APPENDICES

APPENDIX A

RETENTION CONFIGURATION

RETENTION CONFIGURATION OF HR PRACTICES

(Adapted from Collins 2000)

Five point Likert Scale

(1= strongly disagree, 5 = strongly agree)

1. We select individuals who believe in our core values.
2. We involve many employees in the selection process, to insure that we hire individuals that will fit the culture of our organization.
3. We allow employees to wear casual clothing at work.
4. We allow employees to work flexible hours.
5. We allow employees to telecommute.
6. Our organization frequently sponsors events to celebrate business successes.
7. We sponsor outside activities (e.g., sports teams, social events) for employees to socialize with each other.

APPENDIX B

ACQUISITION CONFIGURATION OF HR PRACTICES

ACQUISITION CONFIGURATION OF HR PRACTICES

(Adapted from Snell and Dean 1992)

Five point Likert Scale

(1= strongly disagree, 5 = strongly agree)

1. We have an extensive employee selection process for jobs in this unit (e.g., use of tests, interviews, etc.).
2. It is extremely important to select the best person for a given job.
3. Generally, we try to fill an open position immediately, once a job becomes open in a unit.
4. Many people are involved in the selection decision.
5. We spend a great deal of money to insure that we select the right people for a job.
6. Multiple applicants are screened before a position is filled to ensure the best person is selected for the job.
7. Emphasis is placed on the staffing process in this unit.

APPENDIX C

TRAINING CONFIGURATION

TRAINING

(Adapted from Snell and Dean 1992)

Five point Likert Scale

(1= Very Little, 5 = Great Deal)

1. How extensive is the training process for members of your work unit?
2. How much priority is placed on training employees in your unit?
3. How many different kinds of training programs are available for members of your work unit?
4. Is there much formality in the training process?
5. How much is spent on training programs in your work unit?
6. How many hours of formal training do a typical member of your work unit receive per year?

APPENDIX D

INTERNAL LABOR MARKET

INTERNAL LABOR MARKET

(Adapted from Delaney and Huselid 1996)

Five point Likert Scale

(1= strongly disagree, 5 = strongly agree)

1. Employees are made aware of internal promotion opportunities.
2. The wages in this organization are competitive for this industry.
3. Internal candidates are given consideration over external candidates for job openings.
4. We promote the best human resource practices to ensure employees are treated fairly.

APPENDIX E

INTENTION TO LEAVE

INTENT TO LEAVE

(Adapted from Cook, Hepworth, Wall & Warr, 1981)

Five point Likert Scale

(1= strongly disagree, 5 = strongly agree)

1. I will actively seek a new job in the next year.
2. My continued employment with this organization is low.
3. I think often about quitting.
4. I will probably look for a new job this year.

APPENDIX F

PERCEIVED ORGANIZATIONAL PERFORMANCE

PERCEIVED ORGANIZATIONAL PERFORMANCE

(Adapted from Delaney and Huselid 1996)

Five point Likert Scale

(1= Much Worse, 5 = Much Better)

1. The quality of products, services, or programs, are:
2. The development of new products, services, or programs, are:
3. The ability to attract essential employees is:
4. The ability to retain essential employees is:
5. The satisfaction of customers or clients is:

APPENDIX G

WORK EXPERIENCE AND EDUCATIONAL BACKGROUND

WORK EXPERIENCE AND EDUCATIONAL BACKGROUND

1. Gender F/M
2. How many years have you worked at your present organization?
3. How many years have you worked in this industry?
5. How many total years of work experience do you have?
6. How many years have you worked in your current position?
7. How many years of post-high school education have you attained

Check all of the post-high school degrees that you attained

AS/AA (1)

BS/BA (2)

MS/MA/MBA (3)

Ph.D./MD/JD (terminal degree) (4)

APPENDIX H

ACTIVITY CODES

ACTIVITY CODES

This is an abbreviated list of activity codes as published by Internal Revenue Service Business Master File. (See IRS Publication 557 for comprehensive list). These are codes, which reflect an organization's purposes, activities, operations, or type. An Organization may list up to three activity codes.

001 - Religious Activities

Church, synagogue, etc.

030 – Schools, Colleges and Related Activities

School, nursery, day care, etc.

060 – Cultural, Historical or Other Educational Activities

Museum, zoo, planetarium, community theatrical group, etc.

120 – Other Instructions and Training Activities

Publishing activities, radio or television broadcasting, discussion groups, etc.

150 – Health Services and Related Activities

Hospital, Nursing or convalescent home, blood bank, scientific for diseases, etc.

180 – Scientific Research Activities

Scientific research (industry or government)

200 – Business and Professional Organizations Business promotion (chamber of commerce, Real estate association), Board of trade, etc.

230 – Farming and Related Activities

Farming, Agricultural group, Fair, etc.

250 - Mutual Organizations

Credit union, Mutual insurance, mutual ditch, irrigation, telephone, electric company, etc.

260 – Employee or Membership Benefit Organizations

Fraternal Beneficiary society, order, or association, improvement of conditions of worker, Association of municipal employees, etc.

280 – Sports, Athletic Recreational and Social Activities

Country club, Hobby club, Dinner club, Women club, Variety club, Community center, community recreational facilities (park, playground, etc.

320 – Youth Activities

Boys Scouts, Girl Scouts, etc Care and housing of children (orphanage, etc.)

350 – Conservation, Environmental and Beautification Activities

380 – Housing Activities

Low income housing, Instruction and guidance on housing, etc.

400 – Inner City or Community Activities

Area development, redevelopment of renewal, homeowners association, Attracting or retaining industry in an area, etc.

430 – Civil Rights Activities

Defense of human and civil rights, elimination of social injustices (prejudice, discrimination, etc.)

460 – Litigation and Legal Aid Activities

Public interest litigation, legal aid to indigents, providing bail, etc.

480 – Legislative and Political Activities

Propose, support, or oppose legislation, Voter information, voter education, etc.

510 – Advocacy Attempt to influence public policy concerning:

Firearms, Selective service, National defense. Zoning, right to work, Urban renewal, Busing students to achieve racial balance, etc.

560 – Other Activities Directed to Individuals

Supplying money, goods or services to the poor, gifts and grants to individuals, Marriage counseling, Family planning, Rehabilitating alcoholics, drug abusers, compulsive gamblers, etc.

600 – Activities Purposes and Activities

Community chest, United Way, etc., Booster club, Gifts, grants, or loans to other organizations, etc.

900 - Other purposes and Activities

Cemetery or burial activities, Emergency or disaster aid fund, Veterans activities, Domestic organization with activities outside U.S., Foreign organization, Title holding corporation, Association of employees

APPENDIX I

COVER LETTER

SAMPLE OF COVER LETTER

Letter from Research Team

Date:

Name:

Title:

Company:

Address:

Dear Mr/Mrs. Name:

I am writing to introduce a study regarding Human Resource Practices that we at Nova Southeastern University, Ft. Lauderdale, FL will be conducting over the next few months. I believe that the topic will be of interest to you and your organization.

An important undertaking for both practitioners and academicians is to improve understanding of the role of human resource (HR) practices in firm competitiveness. This survey is a part of a major study examining HR strategies and practices used by nonprofit organizations in the Washington, DC metro area. This study seeks to understand more fully the role strategic human resources management, including human capital, turnover, and organizational performance. In order to expand the knowledge on this topic and to help organizations like yours deal effectively with their environment, I along with my research team will be visiting non profit organizations in the Washington, DC metro area.

The time commitment from any single organization including the initial interview, along with completion and collection of questionnaires will require approximately one hour. Of course, all results will be strictly confidential. Only overall results will be published and no organization or individual will be identified. As part of our research effort, we will provide, upon request, summaries of the research results. These summaries provide the opportunity for you to benchmark your firm's characteristics and performance against that of the sample.

We would like to talk more with you about the aims of the project and to ascertain your interest in participating. We will contact you by telephone within the next few days to set up the initial on-sight interview.

Please feel free to contact me at 410-715-0042 or via email at LHester813@aol.com, if you have any questions prior to our call.

We appreciate your help with this important project.

Sincerely,

Lorenzo Hester
Principal Researcher
Huizenga School of Business
Nova Southeastern University
Fort Lauderdale, FL

APPENDIX J

Human Capital

Questionnaire

Human Capital Measures

4. Age _____
5. Gender F/M _____
6. How many years have you worked at your present organization? _____
7. How many years have you worked in this industry? _____
8. How many total years of work experience do you have? _____
9. How many years have you worked in your current position? _____
10. How many years of post-high school education have you attained? _____

Check all of the post-high school degrees that you attained

AS/AA (1)

BS/BA (2)

MS/MA/MBA (3)

Ph.D./MD/JD (terminal degree) (4)

| Intentions to Turnover | | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|--|--|-------------------|----------|---------|-------|----------------|
| Listed below is a series of statements that evaluate intentions to quit an organization. Please indicate the degree of your agreement or disagreement with each statement by circling a number from 1 = strongly disagree to 5 = strongly agree. | | | | | | |
| 1 | One of your coworker (s) will actively seek a new job in the next year. | 1 | 2 | 3 | 4 | 5 |
| 2 | The likelihood of my continued employment with this organization is low. | 1 | 2 | 3 | 4 | 5 |
| 3 | I talk often talk about quitting. | 1 | 2 | 3 | 4 | 5 |
| 4 | I will probably look for a new job this year. | 1 | 2 | 3 | 4 | 5 |

APPENDIX K

Human Resource Manager

Questionnaire

Human Resource Manager Questionnaire

| Acquisition Configuration | | | | | | |
|--|---|-------------------|----------|---------|-------|----------------|
| Listed below is a series of statements pertaining to HR selection and recruitment practices. Please indicate your level of agreement or disagreement with the following statements by circling a number from 1 = strongly disagree to 5 = strongly agree | | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
| 1. | We have an extensive employee selection process for jobs in this organization (e.g., use of tests, interviews, etc.). | 1 | 2 | 3 | 4 | 5 |
| 2. | It is important to select the best person for a given job. | 1 | 2 | 3 | 4 | 5 |
| 3. | Generally, we try to fill an open position immediately, once a job becomes open in a unit. | 1 | 2 | 3 | 4 | 5 |
| 4. | Many people are involved in the selection decision. | 1 | 2 | 3 | 4 | 5 |
| 5. | We spend a great deal of money to insure that we hire the right person for the job. | 1 | 2 | 3 | 4 | 5 |
| 6. | Multiple applicants are screened before a position is filled to ensure the best person is selected for the job. | 1 | 2 | 3 | 4 | 5 |
| 7. | Importance is placed on the staffing process in this organization. | 1 | 2 | 3 | 4 | 5 |

| Training | | | | | | |
|---|---|-------------|----------|---------|------------|------------|
| Please rate the effectiveness of your HR practices in the area of training within your organization (circle the appropriate number) | | Very Little | Moderate | Neutral | Much/ Many | Great Deal |
| 1. | How extensive is the training process for members of your work unit? | 1 | 2 | 3 | 4 | 5 |
| 2. | How much priority is placed on training employees in our unit? | 1 | 2 | 3 | 4 | 5 |
| 3. | How many different kinds of training programs are available members of your work unit? | 1 | 2 | 3 | 4 | 5 |
| 4. | Is there much formality in the training process? | 1 | 2 | 3 | 4 | 5 |
| 5. | How money is spent on training programs in your work unit? | 1 | 2 | 3 | 4 | 5 |
| 6. | How many hours of formal training do a typical member of your work unit receive per year? | 1 | 2 | 3 | 4 | 5 |

| Retention Configuration | | | | | | |
|--|--|-------------------|----------|---------|-------|----------------|
| Listed below is a series of statements related to HR practices used to retain an organization valuable asset – employees who in turn provide human capital. With respect of your knowledge of HR practices in the organization for which you now work, please indicate the degree of agreement or disagreement with each statement by circling a number from 1 = strongly disagree to 5 = strongly agree. | | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
| 1. | We select individuals who believe in our core values. | 1 | 2 | 3 | 4 | 5 |
| 2. | We involve many employees in the selection process to insure that we hire individuals that will fit the culture of our organization. | 1 | 2 | 3 | 4 | 5 |
| 3. | We offer a relaxed dress code (business casual). | 1 | 2 | 3 | 4 | 5 |
| 4. | We allow employees to work flexible schedules. | 1 | 2 | 3 | 4 | 5 |
| 5. | We provide telecommute/virtual offices. | 1 | 2 | 3 | 4 | 5 |

| | | | | | | |
|----|---|---|---|---|---|---|
| 6. | Our organization frequently celebrates business successes. | 1 | 2 | 3 | 4 | 5 |
| 7. | We sponsor outside activities (e.g., sports teams, social events) for employees to socialize with each other. | 1 | 2 | 3 | 4 | 5 |

| Internal Labor Markets Configuration | | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|--|--|-------------------|----------|---------|-------|----------------|
| With respect of your knowledge of HR practices in the organization for which you now work, please indicate the degree of agreement or disagreement with each statement by circling a number from 1= strongly disagree to 5 = strongly agree. | | | | | | |

| | | | | | | |
|----|--|---|---|---|---|---|
| 1. | Employees are made aware of internal promotion opportunities. | 1 | 2 | 3 | 4 | 5 |
| 2. | The wages in this organization are competitive for this industry. | 1 | 2 | 3 | 4 | 5 |
| 3. | Internal candidates are given consideration over external candidates for job openings. | 1 | 2 | 3 | 4 | 5 |
| 4. | We fill managerial vacancies with people already employed at the organization. | 1 | 2 | 3 | 4 | 5 |

| Perceived Organizational Performance | | Much Worse | Worse | Same | Better | Much Better |
|---|--|------------|-------|------|--------|-------------|
| Compare your organization's performance over the past 2 years to that of other organizations that do the same kind of work (circle the appropriate number). | | | | | | |

| | | | | | | |
|----|--|---|---|---|---|---|
| 1. | The quality of products, services, or programs, are: | 1 | 2 | 3 | 4 | 5 |
| 2. | The development of new products, services, or programs, are: | 1 | 2 | 3 | 4 | 5 |
| 3. | The ability to attract essential employees is: | 1 | 2 | 3 | 4 | 5 |
| 4. | The ability to retain essential employees is: | 1 | 2 | 3 | 4 | 5 |
| 5. | The satisfaction of customers or clients is: | 1 | 2 | 3 | 4 | 5 |

Organization Characteristics:

| | | |
|----|---|---|
| 1. | How many employees are employed in the organization at which you are now working? | |
| 2. | What type of output does your organization provides as a benefit to the community in which it serves. | 1= services 2 = products 3 = both |
| 3. | From the attached appendix please list organization activity code. | |
| 4. | Union | 1 = Yes 2= No |

APPENDIX L

Raw Data

HR Manager Data

| Partid | ac1 | ac2 | ac3 | ac4 | ac5 | ac6 | ac7 | tc1 | tc2 |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| aa042 | 4 | 5 | 2 | 3 | 2 | 4 | 4 | 4 | 4 |
| aas045 | 3 | 4 | 4 | 3 | 2 | 1 | 4 | 3 | 3 |
| abm151 | 5 | 4 | 3 | 4 | 4 | 4 | 5 | 3 | 2 |
| aca221 | 4 | 5 | 4 | 5 | 3 | 4 | 4 | 1 | 1 |
| aci281 | 5 | 5 | 4 | 4 | 3 | 4 | 5 | 4 | 3 |
| aed030 | 3 | 3 | 2 | 4 | 4 | 4 | 4 | 4 | 3 |
| aft054 | 5 | 4 | 4 | 3 | 3 | 3 | 5 | 4 | 4 |
| ahi068 | 5 | 5 | 2 | 5 | 4 | 5 | 5 | 1 | 1 |
| aie052 | 4 | 5 | 5 | 4 | 3 | 4 | 5 | 4 | 4 |
| air264 | 5 | 4 | 2 | 4 | 3 | 4 | 4 | 4 | 4 |
| ala177 | 4 | 5 | 3 | 2 | 2 | 4 | 4 | 2 | 2 |
| alf288 | 2 | 4 | 4 | 5 | 3 | 5 | 2 | 4 | 5 |
| amc071 | 4 | 5 | 4 | 4 | 3 | 4 | 4 | 4 | 4 |
| amr152 | 4 | 4 | 2 | 4 | 4 | 2 | 4 | 3 | 3 |
| ams178 | 4 | 4 | 4 | 2 | 3 | 2 | 4 | 3 | 3 |
| arc032 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 4 |
| asd070 | 4 | 5 | 4 | 4 | 5 | 5 | 4 | 4 | 4 |
| ayh282 | 3 | 4 | 2 | 4 | 2 | 5 | 3 | 1 | 1 |
| bcc191 | 4 | 4 | 2 | 3 | 2 | 5 | 4 | 2 | 2 |
| bcf187 | 5 | 5 | 4 | 5 | 4 | 4 | 4 | 4 | 4 |
| caal85 | 2 | 4 | 3 | 2 | 2 | 4 | 4 | 5 | 4 |
| cca220 | 3 | 4 | 2 | 1 | 1 | 1 | 3 | 3 | 3 |
| ccu034 | 3 | 4 | 3 | 2 | 2 | 5 | 3 | 2 | 2 |
| cec082 | 5 | 5 | 2 | 5 | 2 | 5 | 4 | 1 | 1 |
| chc195 | 4 | 4 | 4 | 3 | 3 | 4 | 4 | 4 | 4 |
| cic164 | 2 | 3 | 1 | 4 | 2 | 2 | 3 | 3 | 3 |
| cpr286 | 4 | 5 | 4 | 4 | 3 | 4 | 5 | 4 | 4 |
| crs028 | 2 | 4 | 4 | 4 | 2 | 4 | 4 | 2 | 3 |
| cua256 | 5 | 5 | 4 | 4 | 2 | 3 | 4 | 1 | 1 |
| cum035 | 2 | 5 | 4 | 4 | 4 | 5 | 5 | 5 | 5 |
| dhc223 | 3 | 5 | 5 | 4 | 4 | 3 | 5 | 3 | 3 |
| edc166 | 4 | 5 | 4 | 5 | 1 | 5 | 5 | 4 | 4 |
| efi250 | 4 | 5 | 3 | 4 | 3 | 5 | 4 | 2 | 2 |
| fbr168 | 4 | 5 | 2 | 4 | 1 | 4 | 4 | 2 | 2 |
| fdl090 | 2 | 5 | 4 | 3 | 2 | 4 | 5 | 2 | 3 |
| jfs211 | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 5 | 5 |
| ffi284 | 4 | 2 | 2 | 2 | 4 | 3 | 1 | 2 | 2 |
| frc087 | 5 | 5 | 2 | 4 | 2 | 5 | 4 | 2 | 3 |
| fsf012 | 4 | 4 | 3 | 3 | 3 | 3 | 4 | 3 | 3 |
| fusa167 | 4 | 5 | 5 | 4 | 5 | 2 | 5 | 5 | 4 |
| gci197 | 4 | 5 | 5 | 3 | 2 | 4 | 5 | 5 | 5 |
| ggi023 | 4 | 4 | 4 | 5 | 4 | 4 | 5 | 5 | 5 |
| ghi036 | 5 | 5 | 3 | 4 | 5 | 4 | 5 | 4 | 4 |
| hch227 | 2 | 4 | 2 | 2 | 2 | 4 | 2 | 2 | 2 |

| Partid | ac1 | ac2 | ac3 | ac4 | ac5 | ac6 | ac7 | tc1 | tc2 |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| hcl204 | 3 | 5 | 4 | 3 | 2 | 4 | 4 | 4 | 4 |
| hfa200 | 5 | 5 | 5 | 4 | 3 | 4 | 5 | 3 | 4 |
| hgh235 | 4 | 4 | 2 | 4 | 3 | 4 | 3 | 2 | 2 |
| hhg093 | 4 | 4 | 5 | 1 | 3 | 3 | 3 | 3 | 3 |
| hhy005 | 3 | 5 | 5 | 3 | 2 | 5 | 3 | 5 | 4 |
| hii213 | 4 | 5 | 4 | 4 | 3 | 4 | 5 | 4 | 4 |
| hnh248 | 4 | 5 | 4 | 4 | 4 | 5 | 4 | 2 | 2 |
| hrs140 | 4 | 4 | 4 | 3 | 3 | 4 | 4 | 3 | 3 |
| icm261 | 5 | 5 | 4 | 5 | 4 | 4 | 5 | 2 | 2 |
| jfs211 | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 5 | 5 |
| jhu183 | 4 | 5 | 3 | 5 | 5 | 5 | 4 | 4 | 4 |
| jss007 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 |
| kpa150 | 3 | 5 | 5 | 4 | 3 | 3 | 4 | 4 | 4 |
| kph283 | 2 | 5 | 5 | 3 | 5 | 5 | 4 | 4 | 5 |
| lci207 | 4 | 2 | 3 | 4 | 2 | 4 | 3 | 4 | 3 |
| lwr255 | 4 | 5 | 4 | 4 | 3 | 4 | 5 | 2 | 2 |
| msb296 | 4 | 5 | 5 | 5 | 3 | 5 | 4 | 4 | 4 |
| ncc000 | 4 | 4 | 2 | 4 | 4 | 4 | 4 | 3 | 3 |
| nif104 | 4 | 5 | 3 | 3 | 3 | 4 | 5 | 2 | 3 |
| nis108 | 4 | 5 | 4 | 5 | 5 | 5 | 5 | 4 | 4 |
| nmh112 | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 4 | 4 |
| npa124 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 4 | 3 |
| npr114 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 2 | 2 |
| pfn128 | 5 | 5 | 3 | 5 | 4 | 5 | 5 | 4 | 4 |
| pva126 | 3 | 4 | 3 | 2 | 3 | 3 | 4 | 5 | 5 |
| sai013 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| sch020 | 4 | 2 | 4 | 2 | 5 | 4 | 4 | 5 | 4 |
| sdc278 | 4 | 5 | 4 | 5 | 3 | 4 | 4 | 1 | 1 |
| seu001 | 4 | 5 | 4 | 4 | 4 | 5 | 4 | 2 | 1 |
| shh287 | 2 | 4 | 2 | 4 | 4 | 4 | 4 | 2 | 2 |
| sla134 | 4 | 4 | 3 | 2 | 2 | 2 | 2 | 3 | 3 |
| smr242 | 2 | 4 | 2 | 4 | 4 | 4 | 3 | 1 | 1 |
| som214 | 4 | 4 | 3 | 3 | 3 | 5 | 5 | 2 | 2 |
| stl002 | 5 | 4 | 2 | 2 | 2 | 1 | 2 | 2 | 4 |
| sui024 | 3 | 4 | 2 | 4 | 3 | 4 | 4 | 3 | 2 |
| tes138 | 4 | 4 | 2 | 3 | 2 | 1 | 2 | 4 | 4 |
| tie174 | 5 | 3 | 1 | 3 | 5 | 5 | 4 | 4 | 1 |
| unc026 | 5 | 5 | 5 | 4 | 4 | 5 | 5 | 3 | 3 |
| vca147 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 2 | 2 |
| vis015 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 3 | 4 |
| wrc253 | 4 | 4 | 2 | 2 | 3 | 4 | 4 | 1 | 1 |
| . | . | . | . | . | . | . | . | . | . |
| . | . | . | . | . | . | . | . | . | . |
| . | . | . | . | . | . | . | . | . | . |
| . | . | . | . | . | . | . | . | . | . |

| tc3 | tc4 | tc5 | tc6 | ilm1 | ilm2 | ilm3 | ilm4 |
|-----|-----|-----|-----|------|------|------|------|
| 2 | 3 | 2 | 2 | 4 | 4 | 3 | 3 |
| 2 | 2 | 2 | 2 | 1 | 2 | 5 | 2 |
| 3 | 4 | 4 | 3 | 4 | 4 | 4 | 4 |
| 1 | 1 | 1 | 1 | 4 | 4 | 4 | 3 |
| 3 | 4 | 4 | 3 | 5 | 5 | 4 | 5 |
| 4 | 4 | 4 | 3 | 4 | 3 | 4 | 2 |
| 4 | 2 | 4 | 4 | 5 | 5 | 5 | 5 |
| 1 | 1 | 1 | 1 | 5 | 4 | 3 | 3 |
| 2 | 1 | 1 | 2 | 5 | 4 | 5 | 4 |
| 2 | 4 | 4 | 2 | 4 | 3 | 3 | 2 |
| 3 | 3 | 3 | 3 | 4 | 3 | 5 | 1 |
| 5 | 3 | 5 | 2 | 5 | 2 | 2 | 3 |
| 4 | 3 | 4 | 3 | 5 | 5 | 5 | 4 |
| 2 | 1 | 2 | 2 | 3 | 4 | 4 | 4 |
| 3 | 3 | 3 | 3 | 4 | 4 | 4 | 3 |
| 4 | 5 | 4 | 4 | 5 | 5 | 5 | 3 |
| 4 | 4 | 4 | 4 | 4 | 5 | 1 | 2 |
| 1 | 1 | 1 | 1 | 4 | 4 | 5 | 4 |
| 4 | 2 | 2 | 3 | 4 | 3 | 4 | 3 |
| 3 | 3 | 3 | 2 | 4 | 4 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 |
| 2 | 2 | 1 | 1 | 4 | 4 | 4 | 4 |
| 2 | 1 | 2 | 3 | 4 | 4 | 2 | 2 |
| 1 | 1 | 1 | 1 | 5 | 2 | 3 | 3 |
| 2 | 4 | 4 | 5 | 5 | 5 | 5 | 5 |
| 2 | 4 | 4 | 2 | 3 | 5 | 4 | 4 |
| 4 | 4 | 4 | 3 | 5 | 5 | 5 | 3 |
| 2 | 3 | 1 | 3 | 5 | 4 | 3 | 3 |
| 1 | 1 | 1 | 1 | 4 | 2 | 5 | 3 |
| 2 | 4 | 4 | 2 | 5 | 5 | 5 | 5 |
| 3 | 3 | 3 | 3 | 3 | 5 | 3 | 3 |
| 1 | 1 | 1 | 2 | 3 | 2 | 4 | 5 |
| 2 | 3 | 2 | 2 | 4 | 5 | 4 | 3 |
| 2 | 2 | 1 | 1 | 5 | 5 | 4 | 5 |
| 3 | 2 | 3 | 2 | 5 | 4 | 4 | 3 |
| 5 | 5 | 5 | 5 | 4 | 4 | 5 | 4 |
| 2 | 2 | 1 | 2 | 4 | 4 | 4 | 4 |
| 3 | 2 | 2 | 2 | 4 | 3 | 4 | 3 |
| 2 | 2 | 2 | 2 | 3 | 1 | 2 | 2 |
| 3 | 4 | 4 | 4 | 4 | 4 | 5 | 4 |
| 2 | 2 | 1 | 2 | 5 | 3 | 5 | 4 |
| 5 | 3 | 4 | 4 | 5 | 4 | 5 | 5 |
| 5 | 4 | 5 | 5 | 4 | 3 | 4 | 4 |
| 1 | 1 | 1 | 2 | 4 | 3 | 3 | 2 |

| tc3 | tc4 | tc5 | tc6 | ilm1 | ilm2 | ilm3 | ilm4 |
|-----|-----|-----|-----|------|------|------|------|
| 5 | 5 | 3 | 4 | 5 | 4 | 4 | 3 |
| 2 | 1 | 2 | 3 | 2 | 3 | 3 | 3 |
| 4 | 4 | 3 | 2 | 4 | 4 | 3 | 3 |
| 3 | 4 | 4 | 3 | 5 | 4 | 4 | 5 |
| 5 | 4 | 4 | 4 | 4 | 3 | 4 | 4 |
| 4 | 4 | 4 | 3 | 5 | 5 | 5 | 4 |
| 2 | 1 | 1 | 2 | 4 | 5 | 5 | 4 |
| 4 | 4 | 4 | 4 | 4 | 4 | 3 | 2 |
| 4 | 2 | 2 | 1 | 4 | 3 | 3 | 3 |
| 5 | 5 | 5 | 5 | 4 | 4 | 5 | 4 |
| 5 | 5 | 5 | 4 | 5 | 4 | 3 | 4 |
| 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 |
| 4 | 2 | 3 | 5 | 5 | 3 | 5 | 4 |
| 5 | 3 | 2 | 3 | 2 | 3 | 3 | 4 |
| 5 | 4 | 2 | 5 | 3 | 4 | 3 | 2 |
| 2 | 1 | 1 | 2 | 5 | 4 | 4 | 3 |
| 4 | 1 | 4 | 4 | 5 | 5 | 5 | 5 |
| 4 | 5 | 4 | 4 | 4 | 4 | 4 | 4 |
| 2 | 2 | 2 | 2 | 4 | 4 | 4 | 4 |
| 4 | 3 | 4 | 4 | 4 | 5 | 5 | 3 |
| 4 | 4 | 4 | 4 | 4 | 2 | 5 | 5 |
| 4 | 3 | 4 | 4 | 3 | 4 | 4 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 2 |
| 3 | 4 | 4 | 5 | 5 | 5 | 1 | 2 |
| 4 | 4 | 4 | 4 | 4 | 5 | 3 | 3 |
| 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 4 | 4 | 4 | 4 | 2 | 1 | 5 | 3 |
| 1 | 1 | 1 | 1 | 4 | 3 | 4 | 3 |
| 1 | 2 | 1 | 1 | 4 | 4 | 4 | 3 |
| 2 | 2 | 2 | 2 | 4 | 4 | 4 | 2 |
| 3 | 3 | 3 | 3 | 3 | 2 | 4 | 4 |
| 1 | 1 | 1 | 1 | 4 | 3 | 4 | 2 |
| 2 | 2 | 2 | 2 | 4 | 2 | 4 | 2 |
| 3 | 4 | 2 | 2 | 5 | 5 | 4 | 2 |
| 3 | 2 | 3 | 3 | 4 | 4 | 4 | 2 |
| 4 | 4 | 4 | 4 | 4 | 3 | 4 | 4 |
| 4 | 4 | 4 | 4 | 5 | 4 | 3 | 3 |
| 2 | 2 | 2 | 2 | 5 | 4 | 4 | 3 |
| 2 | 2 | 3 | 2 | 4 | 3 | 4 | 4 |
| 4 | 4 | 3 | 4 | 5 | 3 | 5 | 5 |
| 1 | 1 | 1 | 1 | 4 | 4 | 2 | 3 |
| . | . | . | . | . | . | . | . |
| . | . | . | . | . | . | . | . |
| . | . | . | . | . | . | . | . |

| rc1 | rc2 | rc3 | rc4 | rc5 | rc6 | rc7 | pop1 |
|-----|-----|-----|-----|-----|-----|-----|------|
| 4 | 4 | 4 | 4 | 3 | 3 | 2 | 5 |
| 2 | 1 | 5 | 4 | 4 | 5 | 5 | 4 |
| 4 | 5 | 5 | 2 | 4 | 4 | 2 | 4 |
| 4 | 4 | 3 | 2 | 2 | 4 | 4 | 4 |
| 5 | 5 | 5 | 4 | 4 | 3 | 4 | 4 |
| 4 | 4 | 1 | 4 | 2 | 4 | 4 | 3 |
| 5 | 5 | 1 | 4 | 4 | 5 | 2 | 5 |
| 4 | 5 | 4 | 4 | 4 | 3 | 4 | 5 |
| 4 | 4 | 5 | 5 | 5 | 3 | 4 | 4 |
| 3 | 2 | 2 | 4 | 2 | 4 | 4 | 4 |
| 3 | 1 | 5 | 4 | 1 | 4 | 4 | 5 |
| 4 | 1 | 4 | 4 | 4 | 5 | 4 | 4 |
| 4 | 4 | 3 | 4 | 3 | 4 | 5 | 4 |
| 2 | 4 | 4 | 4 | 4 | 4 | 1 | 4 |
| 3 | 2 | 4 | 4 | 4 | 3 | 2 | 4 |
| 5 | 5 | 4 | 3 | 2 | 4 | 5 | 5 |
| 5 | 4 | 3 | 4 | 4 | 5 | 5 | 5 |
| 3 | 3 | 5 | 5 | 4 | 3 | 1 | 3 |
| 5 | 3 | 4 | 4 | 5 | 4 | 4 | 5 |
| 4 | 4 | 1 | 1 | 1 | 3 | 4 | 5 |
| 2 | 2 | 2 | 2 | 2 | 4 | 2 | 3 |
| 5 | 2 | 4 | 4 | 2 | 3 | 1 | 4 |
| 5 | 4 | 4 | 4 | 3 | 4 | 3 | 4 |
| 4 | 4 | 4 | 4 | 3 | 2 | 2 | 3 |
| 4 | 3 | 3 | 3 | 3 | 5 | 3 | 5 |
| 4 | 1 | 4 | 2 | 2 | 2 | 3 | 5 |
| 4 | 2 | 5 | 5 | 2 | 3 | 4 | 5 |
| 5 | 4 | 5 | 4 | 1 | 4 | 3 | 4 |
| 2 | 2 | 4 | 2 | 1 | 1 | 1 | 3 |
| 5 | 5 | 1 | 1 | 1 | 5 | 1 | 5 |
| 4 | 4 | 3 | 3 | 3 | 4 | 4 | 3 |
| 5 | 5 | 5 | 5 | 5 | 4 | 1 | 4 |
| 4 | 4 | 5 | 5 | 5 | 3 | 4 | 4 |
| 5 | 5 | 4 | 4 | 2 | 4 | 2 | 4 |
| 4 | 3 | 4 | 4 | 3 | 4 | 1 | 3 |
| 4 | 3 | 4 | 5 | 3 | 4 | 4 | 4 |
| 4 | 2 | 4 | 4 | 2 | 4 | 4 | 4 |
| 5 | 5 | 4 | 2 | 1 | 4 | 3 | 3 |
| 3 | 3 | 1 | 2 | 1 | 2 | 2 | 3 |
| 5 | 4 | 1 | 2 | 1 | 1 | 1 | 4 |
| 5 | 3 | 5 | 5 | 1 | 4 | 1 | 5 |
| 4 | 4 | 4 | 3 | 2 | 3 | 2 | 4 |
| 4 | 3 | 5 | 3 | 3 | 5 | 4 | 5 |
| 2 | 2 | 4 | 2 | 2 | 2 | 2 | 3 |

| rc1 | rc2 | rc3 | rc4 | rc5 | rc6 | rc7 | pop1 |
|-----|-----|-----|-----|-----|-----|-----|------|
| 4 | 5 | 2 | 3 | 2 | 3 | 4 | 5 |
| 5 | 3 | 4 | 4 | 3 | 4 | 1 | 5 |
| 3 | 4 | 2 | 4 | 2 | 3 | 3 | 4 |
| 5 | 5 | 3 | 3 | 1 | 5 | 5 | 5 |
| 4 | 3 | 5 | 3 | 4 | 3 | 3 | 4 |
| 4 | 2 | 5 | 5 | 2 | 3 | 4 | 5 |
| 5 | 4 | 1 | 4 | 1 | 4 | 1 | 4 |
| 4 | 4 | 3 | 3 | 1 | 4 | 4 | 3 |
| 4 | 4 | 5 | 3 | 2 | 4 | 4 | 4 |
| 4 | 3 | 4 | 5 | 3 | 4 | 4 | 4 |
| 4 | 5 | 4 | 4 | 4 | 4 | 5 | 4 |
| 4 | 2 | 4 | 2 | 2 | 3 | 4 | 4 |
| 4 | 3 | 1 | 1 | 1 | 2 | 3 | 5 |
| 2 | 2 | 5 | 5 | 4 | 2 | 1 | 3 |
| 3 | 3 | 4 | 4 | 2 | 3 | 2 | 3 |
| 5 | 4 | 4 | 4 | 4 | 4 | 3 | 5 |
| 5 | 5 | 5 | 2 | 2 | 4 | 4 | 5 |
| 2 | 2 | 4 | 2 | 2 | 2 | 4 | 3 |
| 3 | 3 | 5 | 5 | 3 | 3 | 3 | 4 |
| 4 | 5 | 5 | 5 | 5 | 4 | 3 | 5 |
| 2 | 2 | 4 | 4 | 1 | 4 | 2 | 5 |
| 3 | 2 | 1 | 3 | 1 | 4 | 4 | 4 |
| 4 | 4 | 4 | 4 | 2 | 2 | 2 | 4 |
| 5 | 5 | 4 | 4 | 3 | 4 | 1 | 5 |
| 5 | 4 | 1 | 1 | 1 | 3 | 2 | 5 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 |
| 3 | 2 | 4 | 2 | 2 | 2 | 3 | 1 |
| 4 | 4 | 3 | 2 | 2 | 3 | 3 | 4 |
| 3 | 4 | 4 | 2 | 1 | 2 | 2 | 3 |
| 4 | 4 | 2 | 4 | 2 | 2 | 2 | 4 |
| 4 | 4 | 4 | 3 | 2 | 3 | 2 | 4 |
| 4 | 2 | 4 | 2 | 2 | 4 | 2 | 3 |
| 3 | 5 | 4 | 5 | 4 | 5 | 4 | 5 |
| 1 | 2 | 3 | 3 | 2 | 1 | 3 | 5 |
| 4 | 4 | 4 | 4 | 2 | 3 | 3 | 4 |
| 4 | 3 | 3 | 2 | 1 | 4 | 4 | 4 |
| 3 | 1 | 4 | 4 | 2 | 4 | 3 | 5 |
| 4 | 5 | 4 | 2 | 1 | 3 | 3 | 4 |
| 4 | 3 | 3 | 3 | 3 | 4 | 4 | 3 |
| 5 | 4 | 5 | 3 | 3 | 3 | 3 | 4 |
| 4 | 2 | 2 | 4 | 2 | 2 | 2 | 4 |
| . | . | . | . | . | . | . | . |
| . | . | . | . | . | . | . | . |
| . | . | . | . | . | . | . | . |

| pop2 | pop3 | pop4 | pop5 | emps | output | code | union |
|------|------|------|------|-------|--------|------|-------|
| 4 | 3 | 5 | 5 | 101 | 1 | 260 | 2 |
| 4 | 5 | 5 | 5 | 700 | 3 | 180 | 2 |
| 4 | 4 | 4 | 4 | 1000 | 2 | 120 | 2 |
| 4 | 3 | 3 | 4 | 1250 | 1 | 900 | 2 |
| 4 | 5 | 3 | 5 | 46 | 2 | 200 | 2 |
| 4 | 4 | 4 | 4 | 300 | 1 | 30 | 2 |
| 5 | 5 | 5 | 4 | 800 | 3 | 30 | 2 |
| 5 | 4 | 4 | 4 | 180 | 1 | 60 | 2 |
| 4 | 4 | 2 | 3 | 110 | 1 | 120 | 2 |
| 4 | 4 | 4 | 4 | 160 | 3 | 180 | 2 |
| 4 | 4 | 5 | 4 | 75 | 3 | 180 | 2 |
| 4 | 3 | 3 | 4 | 100 | 1 | 510 | 2 |
| 3 | 4 | 4 | 3 | 360 | 1 | 260 | 2 |
| 4 | 3 | 4 | 4 | 480 | 3 | 150 | 2 |
| 4 | 4 | 4 | 4 | 31 | 1 | 30 | 2 |
| 5 | 4 | 4 | 5 | 35300 | 3 | 200 | 2 |
| 5 | 4 | 5 | 5 | 200 | 3 | 260 | 2 |
| 3 | 4 | 4 | 3 | 140 | 3 | 320 | 2 |
| 5 | 3 | 3 | 4 | 20 | 3 | 1 | 2 |
| 5 | 5 | 4 | 4 | 32 | 1 | 600 | 2 |
| 3 | 3 | 2 | 4 | 1200 | 1 | 280 | 2 |
| 3 | 3 | 4 | 4 | 81 | 1 | 560 | 2 |
| 5 | 3 | 3 | 4 | 32 | 1 | 1 | 2 |
| 2 | 2 | 2 | 3 | 39 | 3 | 260 | 2 |
| 5 | 5 | 5 | 5 | 32 | 3 | 380 | 2 |
| 4 | 4 | 3 | 4 | 43 | 3 | 380 | 2 |
| 5 | 5 | 5 | 5 | 380 | 1 | 180 | 2 |
| 5 | 4 | 5 | 4 | 350 | 1 | 560 | 2 |
| 3 | 4 | 3 | 3 | 2065 | 1 | 30 | 2 |
| 4 | 5 | 5 | 5 | 400 | 3 | 1 | 2 |
| 4 | 3 | 3 | 4 | 2300 | 1 | 150 | 2 |
| 5 | 3 | 3 | 3 | 62 | 3 | 480 | 2 |
| 4 | 3 | 3 | 3 | 245 | 3 | 380 | 2 |
| 4 | 4 | 5 | 5 | 100 | 3 | 510 | 2 |
| 3 | 4 | 4 | 4 | 160 | 3 | 120 | 2 |
| 4 | 4 | 4 | 4 | 258 | 1 | 560 | 2 |
| 3 | 2 | 4 | 4 | 43 | 2 | 560 | 2 |
| 3 | 3 | 3 | 3 | 72 | 3 | 510 | 2 |
| 2 | 3 | 3 | 2 | 187 | 1 | 560 | 2 |
| 3 | 4 | 3 | 4 | 27 | 1 | 560 | 2 |
| 5 | 3 | 3 | 5 | 65 | 1 | 560 | 2 |
| 5 | 4 | 4 | 4 | 140 | 1 | 150 | 2 |
| 3 | 4 | 5 | 5 | 42 | 1 | 380 | 2 |
| 3 | 1 | 1 | 4 | 700 | 1 | 150 | 2 |
| 4 | 5 | 4 | 5 | 193 | 1 | 30 | 2 |

| | | | | | | | |
|---|---|---|---|-------|---|-----|---|
| 5 | 5 | 5 | 5 | 20 | 1 | 150 | 2 |
| 3 | 4 | 2 | 4 | 1400 | 3 | 150 | 2 |
| 4 | 5 | 5 | 5 | 180 | 3 | 560 | 2 |
| 3 | 3 | 3 | 3 | 151 | 1 | 320 | 2 |
| 5 | 5 | 5 | 5 | 300 | 1 | 150 | 2 |
| 4 | 5 | 3 | 4 | 2400 | 1 | 150 | 2 |
| 3 | 3 | 3 | 3 | 260 | 1 | 900 | 2 |
| 4 | 3 | 4 | 4 | 565 | 3 | 560 | 2 |
| 4 | 4 | 4 | 4 | 258 | 1 | 560 | 2 |
| 5 | 4 | 4 | 4 | 28000 | 2 | 30 | 1 |
| 4 | 4 | 4 | 4 | 87 | 1 | 1 | 2 |
| 4 | 3 | 3 | 2 | 1500 | 3 | 150 | 1 |
| 4 | 3 | 3 | 3 | 240 | 1 | 150 | 2 |
| 4 | 4 | 4 | 4 | 98 | 1 | 320 | 2 |
| 4 | 4 | 4 | 4 | 45 | 3 | 900 | 2 |
| 5 | 4 | 5 | 4 | 360 | 1 | 30 | 2 |
| 4 | 4 | 3 | 4 | 400 | 1 | 150 | 2 |
| 3 | 4 | 4 | 4 | 61 | 2 | 200 | 2 |
| 5 | 5 | 5 | 5 | 43 | 3 | 30 | 2 |
| 4 | 4 | 4 | 5 | 200 | 1 | 150 | 1 |
| 4 | 3 | 2 | 4 | 350 | 3 | 900 | 1 |
| 4 | 4 | 4 | 5 | 220 | 3 | 120 | 2 |
| 5 | 5 | 5 | 5 | 330 | 3 | 1 | 2 |
| 4 | 4 | 5 | 5 | 300 | 3 | 900 | 2 |
| 3 | 4 | 3 | 3 | 187 | 1 | 150 | 1 |
| 3 | 2 | 2 | 4 | 31 | 1 | 30 | 2 |
| 4 | 3 | 3 | 4 | 400 | 1 | 30 | 2 |
| 4 | 3 | 3 | 3 | 75 | 3 | 30 | 2 |
| 4 | 4 | 5 | 5 | 1800 | 3 | 150 | 2 |
| 4 | 3 | 4 | 4 | 40 | 3 | 30 | 2 |
| 3 | 2 | 2 | 4 | 51 | 1 | 180 | 2 |
| 4 | 5 | 5 | 5 | 110 | 3 | 280 | 2 |
| 3 | 4 | 4 | 4 | 260 | 1 | 560 | 1 |
| 4 | 2 | 4 | 4 | 91 | 3 | 320 | 2 |
| 4 | 3 | 3 | 4 | 160 | 3 | 150 | 2 |
| 4 | 4 | 5 | 4 | 22 | 1 | 260 | 2 |
| 4 | 4 | 3 | 4 | 215 | 1 | 30 | 2 |
| 2 | 3 | 4 | 3 | 300 | 3 | 150 | 2 |
| 2 | 2 | 2 | 3 | 185 | 1 | 150 | 2 |
| 3 | 2 | 2 | 4 | 249 | 3 | 1 | 2 |

Core Employees Data

| Partid | age | gender | yrsorg | yrsind | wrktot | yrscuwk |
|--------|-----|--------|--------|--------|--------|---------|
| ncc121 | 2 | 2 | 7 | 7 | 7 | 3 |
| ncc122 | 2 | 2 | 1 | 8 | 12 | 8 |
| ncc123 | 2 | 2 | 7 | 7 | 9 | 7 |
| ncc124 | 2 | 1 | 2 | 6 | 11 | 2 |
| ncc125 | 3 | 2 | 2 | 18 | 18 | 2 |
| seu001 | 5 | 1 | 10 | 11 | 64 | 10 |
| seu002 | 5 | 1 | 6 | 25 | 35 | 6 |
| seu003 | 5 | 1 | 14 | 14 | 34 | 14 |
| seu004 | 4 | 2 | 6 | 9 | 11 | 4 |
| seu005 | 4 | 1 | 10 | 15 | 25 | 10 |
| stl176 | 3 | 2 | 1 | 8 | 10 | 7 |
| stl177 | 3 | 2 | 1 | 4 | 4 | 1 |
| stl178 | 4 | 2 | 22 | 25 | 30 | 22 |
| stl179 | 2 | 2 | 2 | 2 | 2 | 1 |
| stl180 | 2 | 2 | 6 | 6 | 6 | 6 |
| hhy116 | 2 | 2 | 1 | 4 | 9 | 1 |
| hhy117 | 2 | 1 | 2 | 8 | 8 | 2 |
| hhy118 | 2 | 2 | 5 | 13 | 15 | 2 |
| hhy119 | 2 | 2 | 1 | 10 | 12 | 1 |
| hhy120 | 3 | 2 | 7 | 7 | 10 | 2 |
| jss171 | 4 | 2 | 24 | 24 | 24 | 24 |
| jss172 | 5 | 2 | 21 | 30 | 41 | 4 |
| jss173 | 2 | 1 | 4 | 6 | 6 | 4 |
| jss174 | 4 | 2 | 4 | 4 | 4 | 4 |
| jss175 | 3 | 2 | 8 | 8 | 15 | 8 |
| fsf166 | 4 | 2 | 10 | 16 | 16 | 8 |
| fsf167 | 3 | 2 | 3 | 14 | 14 | 3 |
| fsf168 | 4 | 2 | 3 | 22 | 22 | 1 |
| fsf169 | 5 | 2 | 8 | 8 | 18 | 1 |
| fsf170 | 2 | 1 | 9 | 9 | 9 | 3 |
| sai161 | 3 | 2 | 3 | 3 | 20 | 2 |
| sai162 | 5 | 2 | 30 | 30 | 30 | 20 |
| sai163 | 4 | 1 | 4 | 20 | 28 | 4 |
| sai164 | 3 | 2 | 6 | 6 | 11 | 2 |
| sai165 | 5 | 2 | 5 | 5 | 44 | 1 |
| vis051 | 2 | 2 | 1 | 6 | 6 | 1 |
| vis052 | 2 | 2 | 6 | 6 | 8 | 6 |
| vis053 | 2 | 1 | 3 | 15 | 15 | 3 |
| vis054 | 2 | 1 | 2 | 4 | 4 | 4 |
| vis055 | 2 | 1 | 2 | 4 | 4 | 4 |
| sch156 | 3 | 2 | 5 | 8 | 17 | 5 |
| sch157 | 3 | 2 | 4 | 12 | 12 | 2 |

| Partid | age | gender | yrsorg | ysind | wrktot | yrscuwk |
|--------|-----|--------|--------|-------|--------|---------|
| sch158 | 4 | 2 | 2 | 18 | 30 | 1 |
| sch159 | 5 | 2 | 19 | 19 | 30 | 8 |
| sch160 | 3 | 2 | 9 | 9 | 21 | 4 |
| ggi036 | 5 | 1 | 1 | 21 | 21 | 1 |
| ggi037 | 2 | 2 | 1 | 1 | 7 | 1 |
| ggi038 | 3 | 2 | 6 | 6 | 6 | 6 |
| ggi039 | 3 | 1 | 7 | 23 | 25 | 7 |
| ggi040 | 3 | 1 | 23 | 13 | 13 | 3 |
| sui396 | 4 | 1 | 6 | 15 | 25 | 6 |
| sui397 | 3 | 2 | 15 | 16 | 16 | 2 |
| sui398 | 3 | 2 | 11 | 11 | 20 | 4 |
| sui399 | 5 | 1 | 15 | 15 | 25 | 12 |
| sui400 | 3 | 2 | 8 | 8 | 10 | 3 |
| unc026 | 3 | 1 | 4 | 10 | 10 | 10 |
| unc027 | 4 | 2 | 2 | 20 | 20 | 2 |
| unc028 | 2 | 1 | 6 | 11 | 15 | 2 |
| unc029 | 3 | 1 | 5 | 8 | 8 | 6 |
| unc030 | 3 | 2 | 3 | 6 | 20 | 6 |
| crs181 | 2 | 2 | 5 | 5 | 13 | 2 |
| crs182 | 3 | 2 | 5 | 9 | 23 | 1 |
| crs183 | 3 | 2 | 8 | 13 | 11 | 1 |
| crs184 | 5 | 2 | 7 | 10 | 31 | 7 |
| crs185 | 2 | 2 | 5 | 7 | 10 | 5 |
| arc021 | 5 | 2 | 8 | 30 | 32 | 3 |
| arc022 | 3 | 2 | 5 | 15 | 18 | 3 |
| arc023 | 3 | 2 | 6 | 12 | 14 | 2 |
| arc024 | 5 | 2 | 5 | 30 | 34 | 5 |
| arc025 | 3 | 2 | 6 | 11 | 18 | 2 |
| ccu076 | 2 | 1 | 2 | 2 | 10 | 2 |
| ccu077 | 3 | 2 | 5 | 5 | 20 | 2 |
| ccu078 | 2 | 1 | 1 | 2 | 10 | 2 |
| ccu079 | 2 | 2 | 6 | 10 | 13 | 1 |
| ccu080 | 3 | 1 | 13 | 13 | 14 | 2 |
| cum266 | 5 | 1 | 43 | 43 | 43 | 9 |
| cum267 | 3 | 2 | 4 | 8 | 16 | 4 |
| cum268 | 3 | 2 | 14 | 20 | 20 | 5 |
| cum269 | 4 | 1 | 13 | 20 | 20 | 8 |
| cum270 | 3 | 2 | 5 | 10 | 10 | 5 |
| ghi006 | 5 | 2 | 10 | 20 | 30 | 10 |
| ghi007 | 3 | 2 | 5 | 9 | 12 | 5 |
| ghi008 | 3 | 1 | 5 | 12 | 10 | 5 |
| ghi009 | 3 | 1 | 18 | 18 | 20 | 2 |
| ghi010 | 3 | 2 | 5 | 8 | 12 | 5 |
| asd081 | 2 | 2 | 2 | 8 | 8 | 2 |
| asd082 | 3 | 1 | 4 | 14 | 14 | 4 |

| Partid | age | gender | yrsorg | yrsind | wrktot | yrscuwk |
|--------|-----|--------|--------|--------|--------|---------|
| asd083 | 3 | 2 | 5 | 5 | 25 | 3 |
| asd084 | 4 | 2 | 1 | 20 | 22 | 12 |
| asd085 | 2 | 2 | 1 | 1 | 8 | 1 |
| cec091 | 2 | 1 | 2 | 2 | 9 | 2 |
| cec092 | 2 | 2 | 6 | 9 | 9 | 6 |
| cec093 | 2 | 2 | 1 | 5 | 5 | 1 |
| cec094 | 2 | 1 | 2 | 2 | 5 | 2 |
| cec095 | 2 | 2 | 1 | 1 | 8 | 1 |
| frc151 | 2 | 2 | 6 | 6 | 6 | 4 |
| frc152 | 3 | 2 | 5 | 10 | 15 | 5 |
| frc153 | 4 | 1 | 15 | 20 | 24 | 15 |
| frc154 | 5 | 2 | 20 | 27 | 27 | 29 |
| frc155 | 5 | 2 | 30 | 45 | 45 | 27 |
| fdl011 | 3 | 2 | 1 | 1 | 18 | 1 |
| fdl012 | 3 | 2 | 6 | 8 | 20 | 6 |
| fdl013 | 5 | 1 | 3 | 31 | 47 | 3 |
| fdl014 | 5 | 1 | 3 | 8 | 33 | 3 |
| fdl015 | 2 | 1 | 5 | 6 | 10 | 5 |
| hhg231 | 4 | 1 | 7 | 7 | 7 | 7 |
| hhg232 | 4 | 2 | 2 | 10 | 25 | 2 |
| hhg233 | 3 | 2 | 3 | 5 | 14 | 5 |
| hhg234 | 3 | 2 | 4 | 6 | 18 | 6 |
| hhg235 | 3 | 2 | 7 | 7 | 7 | 7 |
| nif046 | 4 | 2 | 20 | 20 | 20 | 1 |
| nif047 | 3 | 2 | 14 | 20 | 21 | 4 |
| nif048 | 4 | 2 | 3 | 3 | 25 | 3 |
| nif049 | 4 | 1 | 4 | 20 | 27 | 4 |
| nif050 | 5 | 2 | 4 | 30 | 30 | 4 |
| nis096 | 4 | 1 | 18 | 21 | 25 | 10 |
| nis097 | 2 | 1 | 1 | 1 | 1 | 1 |
| nis098 | 1 | 1 | 4 | 12 | 20 | 4 |
| nis099 | 2 | 1 | 3 | 3 | 8 | 3 |
| nis100 | 3 | 1 | 4 | 19 | 15 | 2 |
| nmh226 | 4 | 1 | 12 | 12 | 18 | 9 |
| nmh227 | 3 | 2 | 8 | 10 | 10 | 8 |
| nmh228 | 4 | 1 | 3 | 3 | 15 | 3 |
| nmh229 | 3 | 1 | 10 | 10 | 10 | 10 |
| nmh230 | 2 | 2 | 1 | 5 | 5 | 1 |
| npr381 | 2 | 2 | 5 | 5 | 6 | 3 |
| npr382 | 2 | 1 | 2 | 2 | 7 | 2 |
| npr383 | 4 | 2 | 11 | 19 | 22 | 2 |
| npr384 | 4 | 2 | 19 | 23 | 23 | 2 |
| npr385 | 2 | 2 | 3 | 3 | 3 | 3 |
| npa221 | 4 | 2 | 4 | 4 | 13 | 4 |
| npa222 | 2 | 2 | 6 | 6 | 6 | 6 |

| npa223 | 3 | 2 | 12 | 20 | 20 | 8 |
|---------|-----|--------|--------|--------|--------|---------|
| Partid | age | gender | yrsorg | yrsind | wrktot | yrscuwk |
| npa224 | 5 | 2 | 14 | 25 | 35 | 6 |
| npa225 | 3 | 1 | 8 | 9 | 12 | 4 |
| pva106 | 4 | 1 | 2 | 2 | 26 | 2 |
| pva107 | 3 | 2 | 4 | 5 | 20 | 4 |
| pva108 | 4 | 1 | 4 | 22 | 22 | 2 |
| pva109 | 3 | 1 | 3 | 2 | 2 | 1 |
| pva110 | 3 | 1 | 2 | 5 | 10 | 2 |
| pfm086 | 2 | 2 | 2 | 4 | 4 | 1 |
| pfm087 | 2 | 1 | 2 | 5 | 5 | 1 |
| pfm088 | 4 | 1 | 7 | 25 | 25 | 7 |
| pfm089 | 2 | 1 | 4 | 6 | 6 | 4 |
| pfm090 | 3 | 1 | 4 | 4 | 22 | 2 |
| sla216 | 2 | 2 | 6 | 8 | 8 | 5 |
| sla217 | 3 | 1 | 7 | 7 | 10 | 4 |
| sla218 | 5 | 2 | 40 | 40 | 40 | 25 |
| sla219 | 5 | 1 | 5 | 5 | 35 | 5 |
| sla220 | 2 | 1 | 2 | 2 | 3 | 2 |
| tes211 | 2 | 2 | 4 | 4 | 4 | 4 |
| tes212 | 4 | 2 | 12 | 18 | 21 | 12 |
| tes214 | 3 | 2 | 7 | 7 | 12 | 7 |
| tes215 | 5 | 2 | 13 | 13 | 31 | 13 |
| test213 | 2 | 1 | 1 | 1 | 7 | 1 |
| hrs206 | 2 | 2 | 1 | 1 | 2 | 1 |
| hrs207 | 4 | 2 | 12 | 30 | 38 | 7 |
| hrs208 | 3 | 2 | 10 | 10 | 10 | 10 |
| hrs209 | 2 | 2 | 3 | 5 | 10 | 5 |
| hrs210 | 3 | 1 | 3 | 3 | 15 | 2 |
| vca286 | 4 | 1 | 20 | 25 | 25 | 8 |
| vca287 | 5 | 2 | 10 | 20 | 25 | 5 |
| vca288 | 4 | 2 | 5 | 20 | 25 | 5 |
| vca289 | 5 | 2 | 4 | 20 | 25 | 4 |
| vca290 | 5 | 2 | 30 | 40 | 40 | 10 |
| kpa016 | 3 | 2 | 2 | 5 | 5 | 2 |
| kpa017 | 3 | 2 | 1 | 1 | 1 | 1 |
| kpa018 | 4 | 2 | 3 | 12 | 18 | 3 |
| kpa019 | 4 | 2 | 4 | 24 | 28 | 4 |
| kpa020 | 4 | 2 | 3 | 20 | 25 | 3 |
| abm316 | 2 | 1 | 4 | 4 | 5 | 4 |
| abm317 | 3 | 2 | 9 | 12 | 15 | 6 |
| abm318 | 4 | 1 | 12 | 12 | 30 | 12 |
| abm319 | 5 | 1 | 2 | 2 | 2 | 32 |
| abm320 | 4 | 2 | 12 | 12 | 20 | 10 |
| amr296 | 5 | 2 | 20 | 25 | 25 | 12 |
| amr297 | 3 | 1 | 15 | 15 | 25 | 5 |

| Partid | age | gender | yrsorg | yrsind | wrktot | yrscuwk |
|---------|-----|--------|--------|--------|--------|---------|
| amr298 | 5 | 2 | 10 | 32 | 32 | 5 |
| amr299 | 3 | 2 | 6 | 8 | 10 | 6 |
| amr300 | 4 | 1 | 15 | 15 | 25 | 10 |
| cic246 | 4 | 2 | 12 | 17 | 26 | 17 |
| cic247 | 3 | 2 | 1 | 10 | 15 | 10 |
| cic248 | 3 | 1 | 9 | 12 | 20 | 9 |
| cic249 | 4 | 2 | 26 | 26 | 32 | 3 |
| cic250 | 5 | 2 | 31 | 31 | 31 | 8 |
| edc056 | 4 | 2 | 5 | 15 | 28 | 5 |
| edc057 | 2 | 2 | 4 | 4 | 9 | 3 |
| edc058 | 3 | 2 | 5 | 16 | 16 | 5 |
| edc059 | 4 | 2 | 9 | 9 | 31 | 9 |
| edc060 | 2 | 2 | 3 | 5 | 7 | 2 |
| fusa261 | 3 | 2 | 2 | 5 | 8 | 2 |
| fusa262 | 4 | 2 | 13 | 13 | 25 | 6 |
| fusa263 | 2 | 2 | 5 | 5 | 5 | 2 |
| fusa264 | 3 | 1 | 6 | 10 | 15 | 6 |
| fusa265 | 3 | 2 | 8 | 8 | 8 | 6 |
| fbr071 | 4 | 1 | 15 | 20 | 23 | 4 |
| fbr072 | 3 | 2 | 8 | 10 | 10 | 8 |
| fbr073 | 2 | 2 | 1 | 1 | 1 | 1 |
| fbr074 | 2 | 2 | 7 | 7 | 7 | 7 |
| fbr075 | 2 | 2 | 2 | 2 | 3 | 2 |
| tie101 | 2 | 2 | 2 | 6 | 10 | 2 |
| tie102 | 3 | 2 | 1 | 6 | 10 | 1 |
| tie103 | 2 | 1 | 2 | 3 | 3 | 2 |
| tie104 | 2 | 1 | 1 | 1 | 5 | 1 |
| tie105 | 5 | 2 | 1 | 20 | 31 | 1 |
| ams311 | 5 | 2 | 10 | 32 | 32 | 5 |
| ams312 | 2 | 2 | 2 | 2 | 4 | 2 |
| ams313 | 2 | 2 | 2 | 2 | 7 | 2 |
| ams314 | 3 | 2 | 9 | 20 | 20 | 5 |
| ams315 | 4 | 1 | 15 | 18 | 25 | 15 |
| jhu406 | 3 | 2 | 5 | 11 | 18 | 1 |
| jhu407 | 5 | 1 | 25 | 37 | 37 | 10 |
| jhu408 | 4 | 1 | 15 | 28 | 28 | 8 |
| jhu409 | 2 | 2 | 5 | 5 | 5 | 5 |
| jhu410 | 3 | 2 | 3 | 20 | 20 | 3 |
| caal26 | 4 | 2 | 1 | 1 | 27 | 1 |
| caal27 | 1 | 2 | 1 | 1 | 4 | 1 |
| caal28 | 4 | 2 | 5 | 5 | 11 | 3 |
| caal29 | 2 | 2 | 5 | 5 | 6 | 2 |
| caal30 | 3 | 2 | 5 | 15 | 21 | 5 |
| befl11 | 2 | 2 | 2 | 8 | 8 | 4 |
| befl12 | 3 | 2 | 4 | 7 | 8 | 4 |

| bcfl13 | 2 | 1 | 3 | 3 | 7 | 3 |
|--------|-----|--------|--------|--------|--------|---------|
| Partid | age | gender | yrsorg | yrsind | wrktot | yrscuwk |
| bcfl14 | 3 | 2 | 1 | 8 | 8 | 1 |
| bcfl15 | 3 | 2 | 3 | 14 | 14 | 1 |
| bcc301 | 4 | 2 | 12 | 15 | 20 | 6 |
| bcc302 | 4 | 1 | 16 | 19 | 26 | 16 |
| bcc303 | 5 | 2 | 16 | 25 | 50 | 16 |
| bcc304 | 5 | 2 | 23 | 42 | 44 | 10 |
| bcc305 | 5 | 2 | 5 | 30 | 35 | 5 |
| chc191 | 5 | 1 | 5 | 5 | 40 | 3 |
| chc192 | 4 | 1 | 2 | 20 | 25 | 2 |
| chc193 | 3 | 2 | 20 | 20 | 20 | 20 |
| chc194 | 2 | 2 | 2 | 4 | 11 | 2 |
| chc195 | 4 | 2 | 16 | 16 | 25 | 16 |
| gci131 | 4 | 2 | 1 | 10 | 10 | 1 |
| gci132 | 4 | 1 | 5 | 14 | 35 | 5 |
| gci133 | 5 | 1 | 7 | 34 | 34 | 7 |
| gci134 | 4 | 1 | 22 | 22 | 25 | 1 |
| gci135 | 2 | 1 | 2 | 10 | 15 | 2 |
| hfa196 | 3 | 2 | 5 | 5 | 5 | 5 |
| hfa197 | 4 | 2 | 1 | 9 | 25 | 1 |
| hfa198 | 2 | 1 | 4 | 4 | 4 | 4 |
| hfa199 | 2 | 2 | 6 | 6 | 13 | 4 |
| hfa200 | 3 | 2 | 10 | 10 | 10 | 2 |
| hcl186 | 5 | 2 | 6 | 6 | 12 | 6 |
| hcl187 | 2 | 2 | 6 | 6 | 6 | 1 |
| hcl188 | 4 | 2 | 5 | 10 | 24 | 5 |
| hcl189 | 4 | 2 | 2 | 5 | 8 | 2 |
| hcl190 | 3 | 2 | 1 | 16 | 16 | 1 |
| lci146 | 5 | 1 | 31 | 27 | 37 | 27 |
| lci147 | 4 | 2 | 3 | 35 | 35 | 3 |
| lci148 | 2 | 2 | 3 | 3 | 10 | 2 |
| lci149 | 4 | 2 | 1 | 31 | 32 | 1 |
| lci150 | 5 | 2 | 27 | 27 | 27 | 11 |
| jfs241 | 4 | 1 | 1 | 25 | 30 | 23 |
| jfs242 | 2 | 2 | 3 | 4 | 4 | 3 |
| jfs243 | 3 | 2 | 9 | 9 | 9 | 9 |
| jfs244 | 4 | 1 | 5 | 15 | 23 | 5 |
| jfs245 | 5 | 2 | 15 | 30 | 30 | 15 |
| hii376 | 4 | 1 | 13 | 15 | 25 | 6 |
| hii377 | 3 | 2 | 3 | 3 | 15 | 2 |
| hii378 | 2 | 2 | 4 | 4 | 11 | 4 |
| hii379 | 3 | 2 | 10 | 10 | 15 | 5 |
| hii380 | 2 | 1 | 3 | 3 | 10 | 3 |
| som271 | 2 | 1 | 3 | 3 | 3 | 3 |
| som272 | 2 | 2 | 3 | 5 | 5 | 3 |

| som273 | 4 | 1 | 13 | 20 | 25 | 5 |
|--------|-----|--------|--------|--------|--------|---------|
| Partid | age | gender | yrsorg | yrsind | wrktot | yrscuwk |
| som274 | 4 | 2 | 12 | 15 | 20 | 4 |
| som275 | 5 | 2 | 20 | 20 | 30 | 10 |
| cca251 | 4 | 1 | 12 | 12 | 20 | 6 |
| cca252 | 5 | 1 | 14 | 27 | 35 | 21 |
| cca253 | 4 | 2 | 7 | 10 | 12 | 10 |
| cca254 | 5 | 1 | 14 | 14 | 14 | 9 |
| cca255 | 5 | 1 | 6 | 9 | 29 | 9 |
| aca321 | 5 | 1 | 19 | 25 | 30 | 10 |
| aca322 | 3 | 2 | 10 | 10 | 12 | 6 |
| aca323 | 4 | 1 | 25 | 25 | 33 | 9 |
| aca324 | 4 | 2 | 22 | 30 | 30 | 10 |
| aca325 | 4 | 2 | 20 | 25 | 30 | 12 |
| dhc276 | 4 | 2 | 4 | 5 | 25 | 3 |
| dhc277 | 4 | 2 | 19 | 19 | 31 | 19 |
| dhc278 | 4 | 2 | 8 | 19 | 30 | 8 |
| dhc279 | 4 | 2 | 2 | 7 | 30 | 2 |
| dhc280 | 3 | 2 | 3 | 9 | 9 | 3 |
| hch356 | 2 | 2 | 3 | 4 | 5 | 3 |
| hch357 | 4 | 2 | 17 | 17 | 20 | 5 |
| hch358 | 4 | 1 | 12 | 20 | 29 | 12 |
| hch359 | 3 | 2 | 8 | 8 | 11 | 6 |
| hch360 | 2 | 1 | 5 | 5 | 10 | 5 |
| hgh336 | 4 | 2 | 16 | 16 | 20 | 8 |
| hgh337 | 5 | 2 | 7 | 30 | 35 | 7 |
| hgh338 | 2 | 2 | 5 | 5 | 5 | 5 |
| hgh339 | 5 | 1 | 12 | 20 | 25 | 12 |
| hgh340 | 5 | 1 | 20 | 25 | 25 | 10 |
| smr401 | 2 | 2 | 3 | 3 | 10 | 3 |
| smr402 | 3 | 2 | 12 | 12 | 18 | 4 |
| smr403 | 3 | 2 | 8 | 8 | 10 | 2 |
| smr404 | 5 | 1 | 25 | 25 | 25 | 6 |
| smr405 | 4 | 1 | 15 | 15 | 25 | 5 |
| hnh346 | 4 | 2 | 26 | 26 | 32 | 6 |
| hnh347 | 4 | 2 | 19 | 23 | 26 | 3 |
| hnh348 | 4 | 2 | 4 | 25 | 25 | 18 |
| hnh349 | 2 | 2 | 2 | 5 | 5 | 1 |
| hnh350 | 4 | 2 | 10 | 19 | 19 | 9 |
| efi416 | 3 | 2 | 18 | 20 | 29 | 12 |
| efi417 | 3 | 2 | 14 | 20 | 18 | 9 |
| efi418 | 4 | 2 | 16 | 16 | 25 | 10 |
| efi419 | 5 | 1 | 16 | 20 | 25 | 9 |
| efi420 | 3 | 2 | 10 | 10 | 10 | 4 |
| wrc411 | 5 | 1 | 31 | 31 | 43 | 5 |
| wrc412 | 3 | 2 | 10 | 10 | 16 | 7 |

| Partid | age | gender | ysorg | ysind | wrktot | yrscuwk |
|--------|-----|--------|-------|-------|--------|---------|
| wrc413 | 5 | 2 | 16 | 20 | 30 | 10 |
| wrc414 | 4 | 2 | 15 | 25 | 25 | 15 |
| wrc415 | 5 | 2 | 8 | 18 | 35 | 8 |
| lwr281 | 2 | 1 | 4 | 4 | 7 | 4 |
| lwr282 | 3 | 1 | 11 | 15 | 15 | 6 |
| lwr283 | 5 | 2 | 4 | 18 | 25 | 4 |
| lwr284 | 3 | 2 | 10 | 10 | 10 | 5 |
| lwr285 | 2 | 2 | 2 | 2 | 3 | 2 |
| cua306 | 5 | 1 | 30 | 30 | 30 | 17 |
| cua307 | 3 | 2 | 9 | 9 | 10 | 5 |
| cua308 | 5 | 1 | 25 | 25 | 30 | 20 |
| cua309 | 4 | 1 | 10 | 25 | 30 | 10 |
| cua310 | 3 | 1 | 11 | 11 | 20 | 8 |
| ala256 | 5 | 1 | 30 | 40 | 40 | 11 |
| ala257 | 4 | 1 | 19 | 20 | 25 | 19 |
| ala258 | 5 | 1 | 28 | 30 | 30 | 15 |
| ala259 | 3 | 2 | 12 | 12 | 12 | 7 |
| ala260 | 4 | 1 | 20 | 22 | 22 | 10 |
| icm351 | 5 | 1 | 11 | 20 | 30 | 7 |
| icm352 | 4 | 1 | 13 | 13 | 25 | 7 |
| icm353 | 5 | 2 | 9 | 25 | 25 | 6 |
| icm354 | 4 | 1 | 13 | 25 | 25 | 10 |
| icm355 | 3 | 2 | 12 | 12 | 20 | 10 |
| air366 | 4 | 1 | 12 | 12 | 20 | 5 |
| air367 | 4 | 1 | 8 | 12 | 25 | 8 |
| air368 | 3 | 2 | 5 | 8 | 16 | 5 |
| air369 | 2 | 2 | 4 | 4 | 10 | 4 |
| air370 | 3 | 1 | 7 | 7 | 12 | 4 |
| sdc391 | 5 | 1 | 25 | 30 | 50 | 25 |
| sdc392 | 3 | 2 | 5 | 12 | 18 | 1 |
| sdc393 | 4 | 1 | 15 | 28 | 28 | 8 |
| sdc394 | 2 | 2 | 5 | 5 | 5 | 5 |
| sdc395 | 2 | 1 | 2 | 2 | 10 | 2 |
| ahi421 | 2 | 2 | 4 | 4 | 4 | 1 |
| ahi422 | 4 | 1 | 14 | 24 | 24 | 10 |
| ahi423 | 3 | 1 | 9 | 9 | 22 | 4 |
| ahi424 | 5 | 1 | 30 | 40 | 50 | 20 |
| ahi425 | 3 | 2 | 10 | 10 | 10 | 4 |
| ayh330 | 2 | 2 | 1 | 6 | 6 | 1 |
| ayh326 | 5 | 1 | 17 | 17 | 25 | 7 |
| ayh327 | 4 | 2 | 20 | 30 | 30 | 10 |
| ayh328 | 4 | 1 | 10 | 10 | 20 | 4 |
| ayh329 | 3 | 2 | 6 | 9 | 16 | 3 |
| kph331 | 3 | 1 | 11 | 11 | 11 | 11 |
| kph332 | 2 | 1 | 5 | 5 | 5 | 5 |

| Partid | age | gender | yrşorg | yrşind | wrktot | yrşcuwk |
|--------|-----|--------|--------|--------|--------|---------|
| kph333 | 3 | 2 | 6 | 6 | 10 | 6 |
| kph334 | 3 | 1 | 8 | 12 | 20 | 8 |
| kph335 | 3 | 1 | 8 | 8 | 19 | 4 |
| ffi416 | 4 | 1 | 10 | 20 | 25 | 8 |
| ffi417 | 3 | 2 | 5 | 5 | 15 | 5 |
| ffi418 | 4 | 1 | 19 | 19 | 30 | 11 |
| ffi419 | 3 | 1 | 14 | 16 | 16 | 3 |
| ffi420 | 5 | 1 | 20 | 20 | 27 | 10 |
| cpr341 | 5 | 2 | 25 | 28 | 28 | 7 |
| cpr342 | 3 | 2 | 4 | 13 | 13 | 3 |
| cpr343 | 3 | 1 | 12 | 12 | 12 | 12 |
| cpr344 | 4 | 2 | 20 | 20 | 28 | 20 |
| cpr345 | 4 | 1 | 10 | 17 | 20 | 7 |
| shh361 | 2 | 2 | 3 | 5 | 15 | 3 |
| shh362 | 2 | 2 | 2 | 2 | 2 | 2 |
| shh363 | 3 | 2 | 3 | 3 | 15 | 2 |
| shh364 | 2 | 2 | 5 | 5 | 6 | 3 |
| shh365 | 2 | 2 | 4 | 4 | 11 | 4 |
| alf386 | 3 | 2 | 2 | 20 | 20 | 2 |
| alf387 | 4 | 1 | 10 | 15 | 25 | 4 |
| alf388 | 3 | 1 | 6 | 6 | 20 | 6 |
| alf389 | 3 | 2 | 9 | 9 | 15 | 1 |
| alf390 | 4 | 1 | 8 | 10 | 25 | 8 |
| msb371 | 4 | 2 | 19 | 23 | 23 | 2 |
| msb372 | 5 | 1 | 25 | 50 | 50 | 20 |
| msb373 | 3 | 1 | 9 | 9 | 20 | 4 |
| msb374 | 3 | 2 | 4 | 7 | 10 | 4 |
| msb375 | 5 | 2 | 13 | 25 | 35 | 10 |
| aed201 | 4 | 2 | 4 | 7 | 14 | 4 |
| aed202 | 2 | 2 | 2 | 3 | 3 | 2 |
| aed203 | 3 | 2 | 4 | 10 | 10 | 2 |
| aed204 | 4 | 1 | 13 | 22 | 25 | 6 |
| aed205 | 5 | 2 | 32 | 32 | 32 | 12 |
| aa041 | 4 | 2 | 5 | 5 | 20 | 5 |
| aa042 | 5 | 2 | 2 | 26 | 26 | 2 |
| aa043 | 4 | 2 | 2 | 20 | 25 | 2 |
| aa044 | 2 | 2 | 3 | 3 | 10 | 1 |
| aa045 | 4 | 2 | 6 | 6 | 20 | 4 |
| aas236 | 3 | 2 | 6 | 6 | 6 | 6 |
| aas237 | 5 | 1 | 10 | 8 | 39 | 8 |
| aas238 | 5 | 1 | 2 | 2 | 27 | 2 |
| aas239 | 4 | 1 | 10 | 10 | 15 | 4 |
| aas240 | 3 | 2 | 4 | 6 | 6 | 4 |
| aie136 | 3 | 1 | 10 | 11 | 20 | 10 |
| aie137 | 3 | 2 | 5 | 5 | 10 | 2 |

| Partid | age | gender | yrsorg | yrsind | wrktot | yrscuwk |
|--------|-----|--------|--------|--------|--------|---------|
| aie138 | 2 | 2 | 4 | 4 | 5 | 2 |
| aie139 | 4 | 2 | 15 | 26 | 26 | 1 |
| aie140 | 4 | 1 | 3 | 10 | 35 | 1 |
| aft291 | 4 | 2 | 24 | 24 | 24 | 2 |
| aft292 | 3 | 2 | 9 | 15 | 20 | 6 |
| aft293 | 5 | 2 | 9 | 30 | 30 | 4 |
| aft294 | 4 | 1 | 13 | 15 | 15 | 10 |
| aft295 | 3 | 2 | 5 | 5 | 15 | 5 |
| ahi031 | 2 | 1 | 4 | 6 | 6 | 4 |
| ahi032 | 2 | 1 | 3 | 3 | 3 | 3 |
| ahi033 | 2 | 2 | 1 | 5 | 15 | 1 |
| ahi034 | 5 | 2 | 5 | 25 | 30 | 5 |
| ahi035 | 5 | 2 | 12 | 19 | 35 | 2 |
| amc141 | 5 | 1 | 14 | 14 | 21 | 5 |
| amc142 | 2 | 1 | 2 | 4 | 4 | 2 |
| amc143 | 2 | 2 | 2 | 2 | 2 | 2 |
| amc144 | 5 | 1 | 34 | 34 | 34 | 34 |
| amc145 | 4 | 1 | 5 | 10 | 15 | 10 |

| edu | degree | it1 | it2 | it3 | it4 |
|-----|--------|-----|-----|-----|-----|
| 3 | 0 | 5 | 1 | 2 | 1 |
| 3 | 0 | 5 | 4 | 4 | 5 |
| 3 | 1 | 4 | 5 | 5 | 5 |
| 3 | 1 | 2 | 4 | 1 | 4 |
| 3 | 0 | 4 | 3 | 2 | 2 |
| 10 | 4 | 3 | 2 | 5 | 5 |
| 12 | 4 | 4 | 5 | 2 | 5 |
| 10 | 3 | 2 | 1 | 1 | 1 |
| 10 | 4 | 5 | 5 | 3 | 5 |
| 15 | 4 | 1 | 1 | 1 | 1 |
| 4 | 2 | 3 | 3 | 2 | 2 |
| 0 | 0 | 1 | 1 | 1 | 1 |
| 2 | 0 | 1 | 4 | 1 | 1 |
| 4 | 2 | 3 | 2 | 2 | 2 |
| 2 | 0 | 3 | 3 | 4 | 4 |
| 1 | 0 | 4 | 4 | 4 | 4 |
| 2 | 1 | 3 | 2 | 2 | 3 |
| 1 | 1 | 4 | 1 | 2 | 2 |
| 6 | 3 | 4 | 2 | 2 | 3 |
| 2 | 0 | 4 | 3 | 5 | 3 |
| 0 | 0 | 4 | 2 | 3 | 1 |
| 2 | 0 | 5 | 1 | 1 | 1 |
| 3 | 1 | 5 | 3 | 2 | 4 |
| 4 | 0 | 5 | 5 | 3 | 4 |
| 12 | 0 | 2 | 1 | 1 | 1 |

| 7 | 4 | 3 | 3 | 3 | 3 |
|-----|--------|-----|-----|-----|-----|
| edu | degree | it1 | it2 | it3 | it4 |
| 4 | 2 | 3 | 2 | 2 | 2 |
| 6 | 3 | 4 | 1 | 1 | 1 |
| 5 | 2 | 4 | 2 | 3 | 2 |
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| 4 | 2 | 5 | 5 | 5 | 5 |
| 6 | 3 | 4 | 1 | 2 | 1 |
| 4 | 2 | 5 | 3 | 3 | 3 |
| 7 | 3 | 3 | 3 | 2 | 3 |
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| 4 | 1 | 3 | 3 | 3 | 3 |
| 4 | 2 | 4 | 4 | 3 | 4 |
| 4 | 2 | 4 | 4 | 3 | 4 |
| 0 | 0 | 4 | 2 | 2 | 2 |
| 4 | 2 | 5 | 3 | 2 | 2 |
| 1 | 0 | 4 | 1 | 1 | 1 |
| 0 | 0 | 3 | 2 | 3 | 3 |
| 1 | 0 | 4 | 2 | 2 | 1 |
| 6 | 3 | 4 | 4 | 3 | 3 |
| 5 | 1 | 4 | 2 | 2 | 2 |
| 5 | 3 | 1 | 1 | 1 | 1 |
| 6 | 3 | 4 | 4 | 2 | 3 |
| 6 | 3 | 5 | 5 | 5 | 5 |
| 6 | 3 | 3 | 2 | 2 | 3 |
| 6 | 3 | 4 | 2 | 1 | 1 |
| 5 | 2 | 1 | 3 | 3 | 3 |
| 4 | 2 | 1 | 1 | 1 | 1 |
| 5 | 2 | 5 | 5 | 5 | 5 |
| 6 | 2 | 5 | 3 | 2 | 2 |
| 8 | 3 | 3 | 1 | 1 | 1 |
| 6 | 3 | 5 | 5 | 1 | 4 |
| 9 | 4 | 5 | 5 | 4 | 3 |
| 6 | 3 | 5 | 1 | 3 | 2 |
| 4 | 2 | 4 | 2 | 1 | 2 |
| 2 | 0 | 4 | 3 | 4 | 4 |
| 7 | 3 | 4 | 1 | 2 | 2 |
| 4 | 2 | 4 | 2 | 2 | 1 |
| 0 | 0 | 4 | 1 | 1 | 1 |
| 6 | 2 | 4 | 2 | 2 | 2 |
| 2 | 0 | 4 | 4 | 3 | 4 |
| 6 | 3 | 5 | 5 | 5 | 5 |
| 4 | 2 | 1 | 1 | 2 | 2 |

| 3 | 2 | 3 | 2 | 2 | 3 |
|-----|--------|-----|-----|-----|-----|
| edu | degree | it1 | it2 | it3 | it4 |
| 3 | 0 | 5 | 5 | 5 | 4 |
| 3 | 0 | 2 | 2 | 2 | 2 |
| 3 | 1 | 5 | 5 | 5 | 5 |
| 7 | 2 | 2 | 2 | 2 | 2 |
| 6 | 2 | 4 | 2 | 1 | 2 |
| 10 | 4 | 3 | 4 | 1 | 1 |
| 4 | 2 | 5 | 5 | 5 | 5 |
| 5 | 2 | 1 | 1 | 1 | 1 |
| 5 | 2 | 3 | 3 | 3 | 3 |
| 4 | 2 | 3 | 1 | 1 | 1 |
| 5 | 2 | 5 | 4 | 4 | 4 |
| 3 | 0 | 5 | 5 | 3 | 5 |
| 3 | 0 | 4 | 3 | 2 | 3 |
| 3 | 0 | 4 | 2 | 2 | 1 |
| 1 | 0 | 4 | 2 | 2 | 2 |
| 4 | 2 | 4 | 3 | 2 | 2 |
| 3 | 0 | 4 | 3 | 2 | 2 |
| 6 | 2 | 4 | 2 | 2 | 3 |
| 3 | 2 | 5 | 3 | 1 | 3 |
| 3 | 2 | 5 | 3 | 1 | 5 |
| 3 | 1 | 5 | 5 | 5 | 5 |
| 5 | 2 | 5 | 3 | 4 | 4 |
| 3 | 2 | 5 | 5 | 5 | 5 |
| 3 | 2 | 5 | 2 | 2 | 5 |
| 3 | 2 | 5 | 3 | 5 | 5 |
| 2 | 3 | 3 | 3 | 3 | 3 |
| 4 | 2 | 3 | 2 | 2 | 3 |
| 4 | 2 | 5 | 2 | 3 | 3 |
| 5 | 3 | 2 | 1 | 1 | 1 |
| 4 | 2 | 2 | 2 | 2 | 2 |
| 7 | 3 | 4 | 3 | 2 | 3 |
| 4 | 2 | 4 | 1 | 1 | 1 |
| 6 | 3 | 3 | 2 | 1 | 1 |
| 6 | 3 | 4 | 2 | 1 | 1 |
| 4 | 2 | 1 | 3 | 3 | 5 |
| 4 | 2 | 4 | 1 | 1 | 1 |
| 5 | 3 | 4 | 2 | 2 | 2 |
| 6 | 3 | 1 | 1 | 1 | 1 |
| 6 | 3 | 1 | 2 | 2 | 2 |
| 5 | 2 | 4 | 2 | 2 | 2 |
| 4 | 1 | 3 | 3 | 2 | 3 |
| 6 | 2 | 4 | 3 | 2 | 3 |
| 7 | 2 | 5 | 3 | 3 | 3 |

| 2 | 0 | 4 | 3 | 3 | 4 |
|-----|--------|-----|-----|-----|-----|
| edu | degree | it1 | it2 | it3 | it4 |
| 0 | 0 | 5 | 2 | 2 | 2 |
| 1 | 1 | 5 | 3 | 2 | 4 |
| 1 | 1 | 3 | 3 | 4 | 4 |
| 3 | 2 | 4 | 3 | 2 | 2 |
| 4 | 2 | 1 | 1 | 1 | 1 |
| 3 | 2 | 5 | 5 | 1 | 5 |
| 12 | 4 | 3 | 2 | 2 | 2 |
| 4 | 2 | 3 | 1 | 1 | 1 |
| 5 | 3 | 3 | 4 | 4 | 3 |
| 8 | 4 | 4 | 1 | 1 | 1 |
| 4 | 2 | 5 | 3 | 3 | 3 |
| 10 | 3 | 5 | 2 | 2 | 2 |
| 4 | 2 | 5 | 3 | 2 | 3 |
| 4 | 2 | 5 | 2 | 1 | 1 |
| 4 | 2 | 4 | 2 | 2 | 2 |
| 4 | 2 | 4 | 2 | 1 | 2 |
| 4 | 2 | 4 | 2 | 2 | 2 |
| 4 | 2 | 4 | 2 | 2 | 2 |
| 4 | 3 | 1 | 1 | 1 | 1 |
| 2 | 0 | 2 | 1 | 1 | 1 |
| 5 | 3 | 2 | 2 | 2 | 2 |
| 6 | 3 | 4 | 4 | 3 | 3 |
| 3 | 1 | 1 | 1 | 1 | 1 |
| 3 | 1 | 4 | 2 | 2 | 2 |
| 3 | 2 | 2 | 3 | 3 | 3 |
| 2 | 1 | 5 | 5 | 4 | 5 |
| 7 | 4 | 4 | 1 | 1 | 1 |
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| 10 | 4 | 3 | 1 | 1 | 2 |
| 8 | 4 | 5 | 3 | 1 | 1 |
| 6 | 2 | 5 | 5 | 3 | 4 |
| 4 | 2 | 5 | 5 | 3 | 3 |
| 4 | 2 | 5 | 5 | 3 | 3 |
| 5 | 3 | 2 | 1 | 1 | 1 |
| 4 | 1 | 2 | 1 | 1 | 1 |
| 2 | 0 | 5 | 4 | 2 | 2 |
| 4 | 2 | 3 | 3 | 2 | 5 |
| 4 | 2 | 2 | 1 | 1 | 1 |
| 4 | 2 | 5 | 5 | 5 | 5 |
| 4 | 2 | 3 | 1 | 1 | 1 |
| 4 | 2 | 3 | 2 | 2 | 3 |
| 3 | 2 | 3 | 2 | 2 | 2 |
| 4 | 2 | 3 | 2 | 2 | 2 |

| | 4 | 2 | 2 | 2 | 2 | 2 |
|----|-----|--------|-----|-----|-----|-----|
| | edu | degree | it1 | it2 | it3 | it4 |
| 2 | 0 | 4 | 2 | 1 | 2 | |
| 3 | 0 | 5 | 3 | 2 | 3 | |
| 8 | 4 | 4 | 2 | 2 | 2 | |
| 7 | 3 | 2 | 2 | 2 | 2 | |
| 5 | 2 | 1 | 1 | 2 | 2 | |
| 6 | 3 | 3 | 1 | 2 | 1 | |
| 4 | 2 | 5 | 1 | 1 | 1 | |
| 10 | 4 | 4 | 3 | 2 | 3 | |
| 8 | 4 | 4 | 3 | 3 | 3 | |
| 8 | 4 | 3 | 2 | 5 | 3 | |
| 4 | 2 | 5 | 2 | 3 | 2 | |
| 6 | 3 | 4 | 2 | 2 | 2 | |
| 5 | 3 | 3 | 4 | 2 | 2 | |
| 5 | 3 | 3 | 4 | 2 | 4 | |
| 6 | 3 | 3 | 1 | 1 | 1 | |
| 11 | 4 | 3 | 5 | 3 | 5 | |
| 5 | 2 | 3 | 2 | 2 | 2 | |
| 4 | 2 | 3 | 2 | 2 | 2 | |
| 5 | 2 | 3 | 3 | 3 | 3 | |
| 5 | 2 | 4 | 2 | 2 | 2 | |
| 5 | 3 | 2 | 3 | 1 | 1 | |
| 4 | 2 | 3 | 2 | 2 | 2 | |
| 5 | 3 | 1 | 4 | 1 | 1 | |
| 12 | 4 | 5 | 4 | 4 | 4 | |
| 3 | 3 | 5 | 1 | 1 | 1 | |
| 6 | 3 | 4 | 1 | 1 | 1 | |
| 8 | 3 | 5 | 5 | 4 | 5 | |
| 1 | 1 | 5 | 5 | 2 | 5 | |
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| 3 | 2 | 4 | 3 | 1 | 5 | |
| 4 | 2 | 2 | 2 | 1 | 3 | |
| 4 | 2 | 3 | 4 | 4 | 4 | |
| 7 | 3 | 2 | 2 | 2 | 2 | |
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| 4 | 2 | 4 | 2 | 2 | 2 | |
| 6 | 3 | 2 | 2 | 1 | 2 | |
| 8 | 3 | 2 | 3 | 4 | 4 | |
| 6 | 3 | 2 | 1 | 1 | 1 | |
| 7 | 3 | 3 | 1 | 1 | 1 | |
| 6 | 3 | 5 | 2 | 1 | 2 | |
| 4 | 2 | 5 | 2 | 1 | 2 | |
| 3 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 2 | 4 | 4 | 4 | 4 | |

| 3 | 1 | 4 | 3 | 3 | 4 |
|-----|--------|-----|-----|-----|-----|
| edu | degree | it1 | it2 | it3 | it4 |
| 3 | 1 | 3 | 3 | 3 | 3 |
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| 5 | 2 | 4 | 1 | 1 | 2 |
| 4 | 2 | 4 | 4 | 1 | 4 |
| 4 | 2 | 3 | 1 | 1 | 1 |
| 4 | 2 | 1 | 1 | 1 | 1 |
| 6 | 3 | 4 | 4 | 4 | 4 |
| 4 | 2 | 2 | 1 | 1 | 1 |
| 20 | 4 | 5 | 5 | 1 | 1 |
| 9 | 4 | 4 | 1 | 1 | 1 |
| 9 | 2 | 5 | 4 | 1 | 5 |
| 12 | 4 | 2 | 3 | 3 | 2 |
| 6 | 3 | 4 | 5 | 2 | 5 |
| 0 | 0 | 4 | 3 | 2 | 5 |
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| 3 | 1 | 5 | 2 | 3 | 3 |
| 1 | 0 | 1 | 1 | 2 | 1 |
| 2 | 1 | 4 | 2 | 5 | 4 |
| 9 | 4 | 5 | 5 | 5 | 5 |
| 3 | 0 | 5 | 5 | 5 | 5 |
| 4 | 3 | 4 | 2 | 2 | 3 |
| 4 | 2 | 3 | 3 | 3 | 3 |
| 8 | 4 | 3 | 3 | 3 | 3 |
| 6 | 3 | 4 | 5 | 5 | 5 |
| 12 | 4 | 3 | 2 | 2 | 2 |
| 4 | 2 | 1 | 1 | 1 | 1 |
| 5 | 2 | 3 | 2 | 1 | 1 |
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| 4 | 2 | 5 | 5 | 2 | 4 |
| 0 | 0 | 1 | 1 | 4 | 1 |
| 8 | 3 | 5 | 4 | 2 | 2 |
| 5 | 3 | 5 | 1 | 1 | 1 |
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| 2 | 1 | 3 | 2 | 2 | 2 |
| 6 | 3 | 5 | 3 | 3 | 2 |
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| 6 | 3 | 2 | 1 | 2 | 1 |
| 6 | 3 | 4 | 3 | 2 | 2 |
| 7 | 4 | 3 | 2 | 1 | 1 |
| 4 | 2 | 5 | 4 | 2 | 5 |
| 4 | 2 | 1 | 1 | 1 | 1 |
| 2 | 1 | 4 | 1 | 1 | 1 |

| 5 | 2 | 3 | 4 | 3 | 5 |
|-----|--------|-----|-----|-----|-----|
| edu | degree | it1 | it2 | it3 | it4 |
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| 9 | 2 | 5 | 1 | 1 | 1 |
| 8 | 3 | 4 | 1 | 1 | 1 |
| 2 | 1 | 1 | 1 | 1 | 1 |
| 5 | 3 | 5 | 3 | 3 | 4 |
| 6 | 2 | 4 | 5 | 5 | 5 |
| 3 | 2 | 5 | 2 | 3 | 4 |
| 2 | 0 | 5 | 3 | 1 | 3 |
| 4 | 3 | 4 | 1 | 1 | 1 |
| 5 | 2 | 5 | 2 | 2 | 4 |
| 6 | 3 | 5 | 3 | 2 | 2 |
| 4 | 2 | 4 | 5 | 4 | 2 |
| 2 | 0 | 5 | 3 | 3 | 1 |
| 5 | 2 | 5 | 2 | 1 | 1 |
| 7 | 2 | 5 | 4 | 4 | 5 |
| 4 | 2 | 2 | 2 | 2 | 1 |
| 5 | 2 | 3 | 3 | 3 | 3 |
| 5 | 2 | 4 | 4 | 3 | 4 |
| 6 | 4 | 3 | 3 | 3 | 3 |
| 4 | 2 | 5 | 5 | 2 | 5 |
| 6 | 4 | 3 | 2 | 1 | 1 |
| 4 | 2 | 3 | 4 | 1 | 4 |
| 10 | 4 | 3 | 1 | 1 | 1 |
| 6 | 3 | 3 | 3 | 3 | 3 |
| 8 | 4 | 4 | 1 | 1 | 3 |
| 10 | 4 | 1 | 1 | 1 | 1 |
| 10 | 4 | 2 | 2 | 1 | 1 |
| 7 | 3 | 2 | 1 | 1 | 1 |
| 7 | 3 | 3 | 5 | 3 | 5 |
| 5 | 3 | 5 | 2 | 1 | 1 |
| 10 | 4 | 2 | 2 | 1 | 1 |
| 7 | 3 | 3 | 4 | 3 | 4 |
| 5 | 2 | 2 | 2 | 2 | 2 |
| 10 | 4 | 2 | 2 | 3 | 2 |
| 4 | 2 | 4 | 2 | 2 | 2 |
| 10 | 4 | 1 | 1 | 1 | 1 |
| 6 | 3 | 4 | 5 | 5 | 5 |
| 4 | 2 | 2 | 2 | 2 | 2 |
| 4 | 2 | 3 | 5 | 4 | 5 |
| 5 | 3 | 3 | 3 | 2 | 3 |
| 5 | 3 | 5 | 1 | 1 | 1 |
| 4 | 2 | 5 | 2 | 1 | 1 |
| 4 | 2 | 3 | 2 | 2 | 4 |

| 4 | 2 | 3 | 3 | 2 | 3 |
|-----|--------|-----|-----|-----|-----|
| edu | degree | it1 | it2 | it3 | it4 |
| 6 | 3 | 5 | 5 | 5 | 5 |
| 4 | 2 | 4 | 4 | 2 | 4 |
| 4 | 2 | 2 | 1 | 1 | 1 |
| 10 | 4 | 4 | 2 | 1 | 1 |
| 8 | 4 | 3 | 3 | 1 | 3 |
| 5 | 2 | 5 | 3 | 2 | 2 |
| 5 | 3 | 1 | 1 | 1 | 1 |
| 10 | 4 | 3 | 3 | 3 | 3 |
| 14 | 4 | 2 | 1 | 1 | 1 |
| 6 | 3 | 4 | 2 | 2 | 2 |
| 0 | 0 | 4 | 1 | 1 | 1 |
| 2 | 1 | 2 | 2 | 2 | 2 |
| 4 | 2 | 4 | 1 | 1 | 1 |
| 6 | 3 | 4 | 2 | 2 | 1 |
| 7 | 3 | 4 | 1 | 1 | 1 |
| 6 | 3 | 3 | 4 | 3 | 5 |
| 8 | 3 | 3 | 4 | 3 | 3 |
| 7 | 3 | 3 | 2 | 1 | 1 |
| 4 | 2 | 1 | 1 | 1 | 1 |
| 3 | 2 | 4 | 3 | 1 | 1 |
| 4 | 2 | 5 | 4 | 4 | 4 |
| 10 | 4 | 5 | 3 | 3 | 3 |
| 4 | 2 | 5 | 4 | 2 | 3 |
| 4 | 2 | 4 | 2 | 2 | 2 |
| 6 | 4 | 3 | 1 | 1 | 1 |
| 4 | 2 | 3 | 2 | 1 | 1 |
| 5 | 2 | 4 | 3 | 2 | 1 |
| 5 | 2 | 2 | 2 | 2 | 2 |
| 4 | 2 | 5 | 5 | 4 | 4 |
| 7 | 4 | 3 | 1 | 1 | 1 |
| 17 | 4 | 5 | 1 | 1 | 1 |
| 10 | 4 | 3 | 3 | 3 | 3 |
| 6 | 3 | 5 | 5 | 2 | 4 |
| 10 | 4 | 3 | 2 | 2 | 4 |
| 10 | 4 | 1 | 1 | 1 | 1 |
| 5 | 3 | 4 | 1 | 1 | 1 |
| 4 | 2 | 3 | 3 | 3 | 3 |
| 4 | 2 | 5 | 2 | 1 | 1 |
| 14 | 4 | 2 | 1 | 1 | 1 |
| 5 | 3 | 1 | 1 | 1 | 1 |
| 4 | 2 | 3 | 3 | 3 | 3 |
| 6 | 3 | 2 | 2 | 2 | 2 |
| 10 | 4 | 3 | 4 | 2 | 2 |
| 4 | 2 | 1 | 1 | 1 | 1 |

| 10 | 4 | 4 | 2 | 2 | 2 |
|-----|--------|-----|-----|-----|-----|
| edu | degree | it1 | it2 | it3 | it4 |
| 10 | 4 | 3 | 2 | 3 | 2 |
| 7 | 3 | 3 | 2 | 3 | 3 |
| 4 | 2 | 5 | 5 | 4 | 4 |
| 7 | 3 | 3 | 2 | 2 | 2 |
| 20 | 4 | 5 | 5 | 1 | 1 |
| 4 | 2 | 3 | 3 | 1 | 1 |
| 9 | 4 | 4 | 1 | 1 | 1 |
| 9 | 3 | 5 | 4 | 1 | 5 |
| 5 | 2 | 2 | 2 | 1 | 3 |
| 6 | 3 | 2 | 2 | 2 | 2 |
| 4 | 2 | 3 | 2 | 2 | 3 |
| 4 | 2 | 4 | 4 | 4 | 4 |
| 8 | 3 | 3 | 1 | 4 | 4 |
| 4 | 2 | 1 | 1 | 1 | 1 |
| 4 | 2 | 4 | 2 | 2 | 2 |
| 6 | 2 | 3 | 1 | 1 | 1 |
| 5 | 2 | 3 | 3 | 2 | 3 |
| 4 | 2 | 3 | 2 | 2 | 2 |
| 5 | 2 | 4 | 2 | 2 | 3 |
| 6 | 3 | 3 | 2 | 1 | 1 |
| 2 | 1 | 5 | 3 | 2 | 4 |
| 4 | 2 | 3 | 3 | 1 | 5 |
| 4 | 2 | 3 | 5 | 1 | 5 |
| 4 | 2 | 3 | 3 | 2 | 2 |
| 5 | 3 | 4 | 2 | 2 | 2 |
| 4 | 2 | 1 | 1 | 1 | 1 |
| 5 | 2 | 3 | 2 | 1 | 2 |
| 6 | 3 | 5 | 2 | 1 | 1 |
| 5 | 3 | 3 | 1 | 1 | 1 |
| 7 | 3 | 5 | 4 | 2 | 1 |
| 4 | 1 | 4 | 2 | 3 | 2 |
| 6 | 3 | 3 | 2 | 1 | 1 |
| 6 | 3 | 2 | 2 | 2 | 2 |
| 5 | 3 | 3 | 2 | 1 | 1 |
| 5 | 2 | 4 | 2 | 2 | 2 |
| 4 | 2 | 4 | 2 | 1 | 1 |
| 7 | 3 | 5 | 4 | 4 | 5 |
| 10 | 3 | 5 | 2 | 2 | 2 |
| 4 | 2 | 2 | 2 | 2 | 1 |
| 12 | 4 | 2 | 3 | 3 | 2 |
| 4 | 2 | 5 | 3 | 1 | 5 |
| 5 | 2 | 3 | 4 | 3 | 4 |
| 4 | 2 | 3 | 3 | 3 | 3 |
| 4 | 2 | 3 | 1 | 1 | 1 |

| 4 | 2 | 4 | 2 | 2 | 2 |
|-----|--------|-----|-----|-----|-----|
| edu | degree | it1 | it2 | it3 | it4 |
| 4 | 2 | 3 | 1 | 1 | 1 |
| 12 | 4 | 3 | 4 | 2 | 3 |
| 5 | 2 | 4 | 2 | 1 | 2 |
| 6 | 3 | 2 | 1 | 1 | 1 |
| 4 | 2 | 5 | 4 | 3 | 4 |
| 7 | 3 | 2 | 2 | 1 | 1 |
| 4 | 2 | 3 | 1 | 1 | 1 |
| 6 | 3 | 5 | 1 | 1 | 1 |
| 4 | 2 | 1 | 1 | 1 | 1 |
| 6 | 3 | 5 | 5 | 2 | 5 |
| 5 | 3 | 5 | 4 | 2 | 5 |
| 3 | 0 | 4 | 1 | 1 | 1 |
| 5 | 1 | 4 | 5 | 2 | 5 |
| 9 | 3 | 4 | 2 | 1 | 1 |
| 9 | 4 | 2 | 2 | 2 | 2 |
| 7 | 4 | 2 | 2 | 2 | 2 |
| 8 | 4 | 5 | 5 | 2 | 5 |
| 8 | 4 | 3 | 3 | 2 | 2 |
| 7 | 2 | 4 | 2 | 2 | 1 |
| 5 | 3 | 5 | 3 | 2 | 4 |
| 11 | 4 | 5 | 2 | 2 | 3 |
| 3 | 2 | 5 | 5 | 4 | 5 |
| 6 | 2 | 4 | 1 | 2 | 2 |
| 4 | 2 | 5 | 1 | 1 | 1 |
| 4 | 2 | 3 | 2 | 1 | 1 |
| 5 | 3 | 4 | 3 | 1 | 4 |
| 4 | 2 | 5 | 3 | 2 | 2 |
| 10 | 4 | 5 | 3 | 2 | 4 |
| 4 | 2 | 1 | 1 | 1 | 1 |
| 8 | 4 | 5 | 3 | 1 | 1 |
| 6 | 3 | 2 | 1 | 1 | 1 |
| 14 | 4 | 4 | 3 | 2 | 3 |
| 6 | 2 | 5 | 2 | 1 | 2 |
| 6 | 3 | 5 | 2 | 3 | 3 |
| 13 | 4 | 5 | 2 | 4 | 3 |
| 5 | 2 | 1 | 3 | 1 | 1 |
| 4 | 2 | 4 | 2 | 1 | 1 |
| 6 | 3 | 5 | 3 | 3 | 3 |
| 10 | 4 | 3 | 2 | 2 | 2 |

APPENDIX M

DATA REQUEST FORMS

National Center for Charitable Statistics

Center on Nonprofits and Philanthropy
The Urban Institute
2100 M Street, NW, Washington, DC 20037

202-261-5801
202-833-6231 *fax*
<http://nccs.urban.org>

Data Request Form

Name

Date

Affiliation

Address

City, State

Zip Code

Phone

Email

Circle one: Nonprofit Media Consultant Researcher/Practitioner Government

File (s) or service Requested

Business Master File, 1995 – 2003

Core File, 1990 – 2001

IRS/SOI Samples, 1982-1983 & 1985 – 1998

Form 990 Parts 3 & 8 Supplement, 1992
Unified Database of Arts Organizations

Core-PF Files, 1990 – 2001

Core Other Files, 1990 – 2001

Purpose – Please describe your research project:

National Center for Charitable Statistics

Center on Nonprofits and Philanthropy
The Urban Institute
2100 M Street, NW, Washington, DC 20037

202-261-5801
202-833-6231 *fax*
<http://nccs.urban.org>

Data User Agreement

*Please read carefully, If you do have questions,
please sign and date this form and fax it to 202-833-6231.*

In signing this form, I affirm that data obtained from the National Center for Charitable Statistics (NCCS) will be used for the purposes of research and analysis only. I affirm that the research findings will be publicly available in aggregate outputs only. ***Data on individual records will not be disclosed.*** These data will be used solely for purposes specified below.

I agree ***not to distribute, sell, or permit others to use the data*** (or portion thereof) obtained from the NCCS without the express written permission of NCCS.

I recognize that there may be errors in the data. I will review the NCCS Data Guide (<http://nccs.urban.org>) for a discussion of the limitation of the data, and will not hold NCCS liable for such errors.

If I become aware of errors, I will provide NCCS with list of errors and corrections in electronic format. I also agree to notify NCCS of any publications or products that result from the use of these data by emailing NCCS at nccs@ui.urban.org.