STRATEGIC HUMAN RESOURCE MANAGEMENT AT THE CROSSROADS: RELATIONSHIPS AMONG HUMAN RESOURCE CAPITAL, OVERLAPPING TENURE, BEHAVIORS, AND PERFORMANCE

by

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ABSTRACT

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Empirical work in strategic human resource management has tended to focus solely on the relationship between human resource practices and firm performance. This study attempts to shift the focus of strategic human resource management to the human resource pool to examine the influence that the human resource has on performance. Additionally, this study examines the social capital variable of overlapping tenure, which is the amount of time individuals have worked together towards common performance outcomes. The resource-based view of the firm is employed as the guiding theoretical framework in which to examine the relationships of human capital and social capital with performance. This study also addresses a gap in the strategic human resource

management literature by examining human resource behaviors. Following the systems perspective of strategic human resource management this study tests relationships among human capital, social capital, human resource behaviors, and performance.

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CHAPTER 1

INTRODUCTION

The study of strategic human resource management includes both human resource practices and the human capital pool as important elements in the success of organizations (e.g., Huselid, 1995; Lado & Wilson, 1994; Wright, Dunford, & Snell, 2001; Wright & McMahan, 1992; Wright, McMahan, & McWilliams, 1994). Wright and McMahan (1992) defined strategic human resource management as "the pattern of planned human resource deployments and activities intended to enable an organization to achieve its goals" (pg. 298). Thus, strategic human resource management has two fundamental assertions: 1. an organization's human resources are of strategic importance, because knowledge, skills, abilities, behaviors, and interactions of employees have the potential to influence organizational performance and 2. a firm's human resource practices are instrumental in developing the strategic capability of the human resource capital pool. This study theoretically develops and empirically tests the first assertion by examining relationships among human capital, social capital, human resource behaviors, and performance.

Over the years empirical work in strategic human resource management has tended to focus on the relationship between human resource practices and organization performance (e.g., Arthur, 1992, 1994; Combs, Liu, Hall, & Ketchen, 2006; Delery &

Doty, 1996; Huselid, 1995; MacDuffie, 1995). While the focus of empirical work in strategic human resource management has focused on the relationship between human resource practices and organization performance, there have been few studies that have examined the relationship between human resource capital and performance (e.g., Carmeli & Schaubroeck, 2005; Wright et al., 1994; Wright, Smart, & McMahan, 1995). This study employs the resource-based view of the firm and revisits the Wright and McMahan (1992) model to test relationships among human resource capital, human resource behaviors, and performance. Further this study introduces a social capital variable which is labeled as, overlapping tenure. Overlapping tenure is important because it is a measure of the amount of time that people have actually worked together and may influence performance.

According to the resource-based view of the firm, resources that are rare, valuable, inimitable, and non-substitutable may create sustained competitive advantages for organizations (Barney, 1991). Human resources, which are the pool of human capital under a firm's control in a direct employment relationship, are one such resource that may create a sustained competitive advantage for organizations (Wright et al., 1994). The resource-based view of the firm has been used extensively in the strategic human resource management literature (McMahan, Virick, & Wright., 1999; Wright et al., 2001) to describe both the relationship between human resource practices and firm performance (e.g., Huselid, 1995) and the relationship between human resource capital and firm performance (e.g., Carmeli & Schaubroeck, 2005; Wright et al., 1994; Wright et al., 1995).

There have been calls in the strategic human resource management literature, most recently by Becker and Huselid (2006) to further examine the "black box" between human resource practices and firm performance. The "black box" is the mechanism(s) through which human resource practices influence firm performance. Becker and Huselid (2006) discussed implementation as a way to examine the black box. In this study a different view is taken, as the focus is placed on human resource capital instead of human resource practices. Wright et al. (1994) made a distinction between an organization's human resources and human resource practices and proposed that the human capital pool has a greater potential to be a source of sustained competitive advantage than human resource practices.

In this current study, the human capital pool is defined as the knowledge, skills, and abilities (KSAs) of the human resources that make up the human capital pool. There is an extensive literature that has tended to use general cognitive ability as a measure of knowledge, skills, and abilities and it has been found to be positively related to performance at the individual (e.g., Hunter & Hunter, 1984; Martocchio & Judge, 1997; Phillips & Gully, 1997; Ree, Earles, & Teachout, 1994) and group levels (e.g., Barrick, Stewart, Neubert, & Mount, 1998; Bell, 2007; Tziner & Eden, 1985; Stevens & Campion, 1994; Williams & Sternberg, 1988). Studies of human capital have tended to take place at the organizational level and have relied on general measures of human capital (e.g., Carmeli & Schaubroeck, 2005; Lopez-Cabrales, Valle, & Herrero, 2006; Takeuchi, Lepak, Wang, and Takeuchi, 2007). These studies have found a positive relationship between human capital and firm performance. This study employs an industry accepted,

task specific measures of human capital to test the relationship between human capital and performance.

The social capital variable of overlapping tenure and its relationship with performance is also examined in this study. In general, social capital refers to an asset that is inherent in social relations and networks (Leana & Van Buren, 1999). In this study, a focus is placed on stability of relationships by examining the amount of time that team members have worked with one another and the amount of time that they have worked with their manager. At a team level, studies have tended to examine team tenure, which is an average of the amount of time each individual has been a member of a team (e.g., Boeker, 1997; Johnson, Hoskisson, & Hitt, 1993; Sutcliffe, 1994; Wiersema & Bantel, 1992). Different from team tenure, overlapping tenure is the amount of time individuals have worked together (Luo, 2001). Thus, instead of measuring tenure in a team, this current study will measure and examine the amount of time that people have actually worked together.

This study will also follow the systems perspective of strategic human resource management. Under the systems perspective, human capital is the input that creates the throughput of behaviors that have an outcome of performance (Wright & Snell. 1991). The relationships between human capital and social capital with human resource behaviors will be examined. Additionally, the mediating effects that behaviors may have on the relationship between human capital and performance and the relationship between social capital and performance will be examined. Thus, the influences that human capital and social capital have on performance may work through the behaviors that people

exhibit. Human resource behaviors have been understudied in strategic human resource management, thus this study looks to fill a gap in the strategic human resource management literature by examining the relationships among human capital, social capital, behaviors, and performance.

In order to test the relationships listed above, National Collegiate Athletic Association (NCAA) division one men's basketball teams will be used as the sample for this study. NCAA men's basketball teams have been used in previous studies (e.g., Clement & McCormick, 1989; Dirks, 2000; Wright, Smart, McMahan, 1995). This is a desirable sample for this study because, first, the success of a basketball team depends almost entirely upon the players and coaches. Second, the players on a basketball team are interdependent. Studying NCAA men's basketball provides an opportunity to examine organizations competing in the same industry under the same rules and regulations. Also, NCAA men's basketball teams have the same metrics for human capital, behaviors, and performance.

This study looks to contribute to strategic human resource management literature by placing a focus on the relationships among human capital, social capital, human resource behaviors, and performance. Different from past studies which have tended to use general or generic measures of human capital (e.g., Carmeli & Schaubroeck, 2005; Lopez-Cabrales et al., 2006; Takeuchi et al., 2007), this study employs a task specific measure of human capital. Additionally, overlapping tenure, which is defined as the amount of time individuals have worked together is measured. Previous measures have only averaged the amount of time individuals have worked in the same organization,

different from previous measures, overlapping tenure assesses the amount of time individuals have actually worked together and not simply their time in an organization. This study also places an emphasis on human resource behaviors, which have been understudied in strategic human resource management literature. According to Wright et al. (1994) organizations can only benefit from the human capital inherent in human resources through the behaviors of the human resources. Therefore, in this study human resource behaviors are studied as a mechanism through which human capital and social capital influence performance.

CHAPTER 2

LITERATURE REVIEW

2.1 Resource-Based View of the Firm

The resource-based view of the firm has become the most widely used theory in strategic human resource management (McMahan, et al., 1999; Wright et al., 2001). In this study the resource-based view of the firm is employed to provide a framework to examine the relationship between human resource capital and organizational performance.

The resource-based view of the firm is based on the work of Penrose (1959). As elaborated by Wernerfelt (1984) this framework focuses on the properties of individual resources that an organization may possess and its linkage with the strategy formulation of organizations. Wernerfelt (1984) also argued that an effective strategy involves a balance between the use of existing resources and the development of new resources.

Barney (1991) defined firm resources to include all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness. Barney (1991) defined three different types of resources. Physical resources include the physical technology used in a firm, a firm's plant and equipment, its location, and its access to raw materials. Human resources include the

training, experience, judgment, intelligence, relationships, and insight of individual managers and workers in a firm. Organizational resources include a firm's formal reporting structure, its formal and informal planning, controlling, and coordinating systems, as well as informal relations among groups within a firm and between a firm and those in its environment (Barney, 1991).

Under the resource-based view of the firm, the resources are the source of competitive advantage. Competitive advantage is defined as an organization "implementing a value creating strategy not simultaneously being implemented by any current or potential competitors" (Barney, 1991: 102). A sustained competitive advantage exists only after efforts to replicate that advantage has ceased (Barney, 1991). The resource-based view of the firm differs from the traditional strategy viewpoint in that it examines resources within organizations. Thus, according to the resource-based view of the firm, competitive advantage can only occur when resources are heterogeneous and immobile (Barney, 1991). Resource heterogeneity means that resources vary across organizations and immobility means that competing organizations are unable to obtain the resources from other organizations (Wright et al., 1994).

In order for resources to have the potential to be a source of sustained competitive advantage they must be valuable, rare, inimitable, and non-substitutable (Barney, 1991). Resources are valuable when they enable an organization to implement strategies that improve its efficiency and effectiveness. From the traditional strengths-weaknesses-opportunities-threats perspective, organizations are able to improve their performance

when their strategies exploit opportunities and neutralize threats. Thus, resources are valuable when they exploit opportunities or neutralize threats (Barney, 1991).

Resources are rare when they cannot be possessed by a large number of competing organizations. If a large number of organizations possess a specific valuable resource, then each of these organizations may use the resource in the same fashion and implement a common strategy that gives no organization a competitive advantage (Barney, 1991). This same concept can be applied to bundles of resources that are needed for organizations to develop and implement strategies. In order for strategies to be developed and implemented, different resources such as physical resources, human resources, and organizational resources are required. If the bundle of resources is not rare, then a large number of organizations will be able to develop and implement similar strategies, thus, these strategies will not be a source of sustained competitive advantage even if the resources are valuable (Barney, 1991).

Resources can be inimitable i.e., not easily adopted for one or a combination of three reasons: unique historical conditions, causal ambiguity, and social complexity. The unique history of an organization can dictate what resources an organization acquires and how the resources are used. If an organization acquires valuable and rare resources because of its unique path through time, it will be able to develop strategies using these resources that other organizations cannot. This would create a sustained competitive advantage for the organization because it is unlikely that other organizations have taken the same path through history (Barney, 1991). Under causal ambiguity competing organizations cannot know the actions they should take to try to duplicate the strategies

of organizations with sustained competitive advantages. In this case the link between the resources of an organization and an organization's sustained competitive advantage is not understood (Barney, 1991). When the link between an organization's resources and its sustained competitive advantage is not understood, then it is difficult for other organizations to duplicate the organization's strategy by imitating the organization's resources because it is not known which resources should be imitated (Barney, 1991). An interesting note with casual ambiguity is that not only must competing organizations not know the link between an organization's resources and it competitive advantage, but the organization itself must not perfectly understand the link between its resources and its competitive advantage. This makes logical sense in that a competing organization may hire employees away from the organization and the employees may inform the competing organization of the link between the resources and the organization's competitive advantage (Barney, 1991). A final reason why an organization's resources may be inimitable is social complexity (Barney, 1991). Social complexity can involve many things such as relationships among managers, relationships among employees, relationships with suppliers, relationships with customers, and many others.

The last requirement for a resource to potentially provide a sustained competitive advantage is non-substitutability. Barney (1991:111) states "there must be no strategically equivalent valuable resources that are themselves either not rare or imitable." According to Barney (1991), substitutability can take at least two forms. The first is though it may not be possible for an organization to imitate another organization's resources exactly, it may be possible to substitute a similar resource that enables the

organization to develop and implement the same strategy. Second, very different firm resource can be substitutes (Barney, 1991). Consequently, when resources are valuable, rare, inimitable, and non-substitutable, they may create sustained competitive advantages for organizations.

While the resource-based view of the firm has been used extensively, some have argued that there are issues with the resource-based view of the firm. A key issue has concerned the model's testability. Some have argued that the resource-based view is tautological (Powell, 2001; Priem & Butler, 2001). For example, Priem and Butler (2001) argue "if valuable resources are defined as those increasing efficiency and/or effectiveness, and competitive advantage is defined as achieving increases in efficiency and/or effectiveness, a tautology exists" (pg. 58). Lado, Boyd, Wright, & Kroll (2006) discussed paradoxes in the resource based view such as the causal ambiguity paradox and the performance paradox. Causal ambiguity presents a paradox because under causal ambiguity it is not known how resources influence performance. Thus, neither competitors nor the organization itself know how its resources contribute to performance. Performance creates a paradox because it is difficult to measure. This is because over time, measures of performance lose their ability to discriminate between good and bad performance, thus new performance measures are constantly being created (Meyer & Gupta, 1995). While issues have been raised with the resource-based view, it is still widely used in many areas including: strategic management (e.g., Barney, 1991; Petraf, 1993), human resources management (e.g., Wright & McMahan, 1992; Wright et al,

1995), operations management (e.g., Cox, 1996), marketing (e.g., Hunt, 2000; Hunt & Morgan, 1995,), and information systems (e.g., Bharadwaj, 2000)

2.2 Strategic Human Resource Management

. In the following sections, strategic human resource management literature is reviewed. First, the extensive literature on the relationship between human resource practices and firm performance will be reviewed. A general discussion of human capital, followed by a specific review of the literature in strategic human resource management that has examined the human capital pool, and a review of knowledge, skills, and abilities will conclude this chapter.

As previously discussed, strategic human resource management is defined as "the pattern of planned human resource deployments and activities intended to enable an organization to achieve its goals" Wright and McMahan (1992:298). The definition includes first the vertical linkage of human resource management practices with the strategic management process of the organization (Wright & McMahan, 1992). Secondly, the horizontal linkage emphasizes the coordination among the various human resource management practices (Wright & McMahan, 1992). Consequently, strategic human resource management is concerned with human resource practices, the human capital pool, the required human resource behaviors, and the effectiveness of these based on business strategy (Wright & McMahan, 1992). The conceptual model (see figure 1) proposed by Wright and McMahan (1992) depicts a variety of relationships that would occur within a strategic human resource management framework. The links from the

Wright and McMahan (1992) model that have been examined most extensively concern human resource practices and performance. While fewer studies in strategic human resource management have examined the link of the human capital pool to firm performance

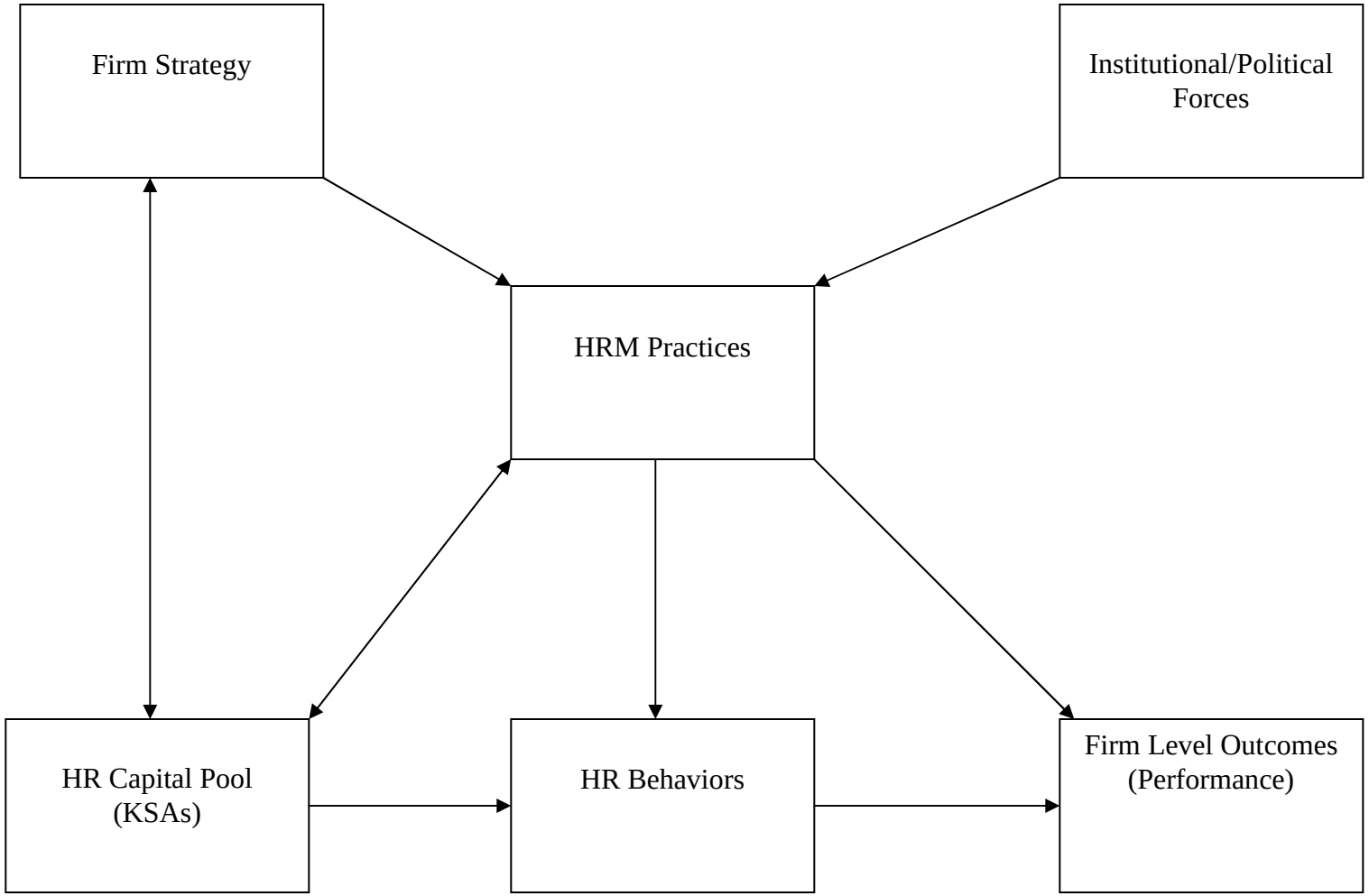

Figure 1: Strategic Human Resource Management Model Adapted from Wright and McMahan (1992) and McMahan, Virick, and Wright (1999)

2.3 Human Resource Practices in Strategic Human Resource Management

As stated earlier, empirical work in strategic human resource management has tended to focus on human resource practices. In a study of steel mini-mills, Arthur (1992) examined differences in industrial relations systems based on the strategy of the mini-mills. The functions that made up the industrial relations systems studied by Arthur (1992) included organization of work, employee relations, staffing, supervision, training, and compensation. Arthur's (1992) findings support the hypothesis that firms with different strategies employ different industrial relations systems. Specifically, in a cost leadership strategy, a cost reduction industrial relations system was found and in a differentiation business strategy a commitment maximizing industrial relations system was found.

In another study, Snell and Dean (1992) examined differences in the individual human resource practices that organizations would employ based on their manufacturing strategy. Snell and Dean studied three different types of manufacturing strategy: advanced manufacturing technology, just-in-time inventory, and total quality management along with five different human resource practices: selective staffing, comprehensive training, performance appraisal, externally equitable rewards, and individually equitable rewards. Similar to Arthur (1992), Snell and Dean (1992) found that different human resource practices were employed based on the manufacturing strategy of an organization. The use of advanced manufacturing technology was positively related to the use of selective staffing, comprehensive training, performance appraisal, and externally related rewards for operations employees and to selective

staffing for quality employees. Total quality management was related to the same human resource practices as advanced manufacturing technology for operations employees and was also related to comprehensive training for quality employees. Lastly, just-in-time was negatively related to selective staffing for operations employees and to performance appraisal for quality employees and was positively related to selective staffing for quality employees. The two studies described above show that different human resource practices may be employed by organizations based on their strategies.

In a conceptual article, Lado and Wilson (1994) employed the resource-based view of the firm to describe the conditions under which systems of human resource practices could be used to develop firm competencies. A system of human resource practices with all of its complementarities and interdependencies may be a source of sustained competitive advantage (Lado and Wilson, 1994).

Commitment and control human resource systems and their relationships with performance and employee turnover were examined by Arthur (1994). Control human resource systems are characterized by reducing labor costs, improving efficiency, enforcing employee compliance with rules and procedures, and basing employee rewards on measurable output criteria (Eisenhardt, 1985; Walton, 1985). On the other hand, commitment human resource systems shape employee behaviors by creating psychological links between organizational and employee goals (Arthur, 1994). An example would be developing committed employees by allowing them to use their discretion to carry out tasks that are consistent with the organization's goals (Organ,

1988). Arthur (1994) found that firms with commitment human resource systems had higher performance and lower turnover than firms with control human resource systems.

Other studies of human resource practices, MacDuffie (1995) examined "bundles" of human resource practices and their relationship with organization performance. He reported that bundles of human resource practices, including staffing, training, compensation, and performance management practices were positively related to organization performance (MacDuffie, 1995). Similar to MacDuffie (1995), Ichinowski, Shaw, and Prennushi (1997) examined bundles of human resource practices and their impact on organization performance. Inchinowski et al (1997) stated that "if firms adopt work practices in a complementary fashion, then empirical tests should consider the impacts of groups of practices rather than simply the effects of individual practices" (pg. 295). The bundle of human resource practices studied by Ichinowski et al. (1997) included incentive pay, teamwork, flexible job assignments, employment security, and training. It was found that the bundle of human resource practices was positively related to organization performance (Ichniowski et al., 1997).

Huselid (1995) also examined bundles of human resource practices. The bundle of human resource practices was termed high performance work practices. The definition of high performance work practices used by Huselid (1995) was adopted from Jones and Wright (1992) and included comprehensive employee recruitment and selection procedures, incentive compensation systems, performance management systems, and extensive employee involvement and training, can improve the knowledge, skills, and abilities of a firm's current and potential employees, increase their motivation, reduce

shirking, and enhance retention of quality employees while encouraging nonperformers to leave the firm. Human resource practices may influence employee skills through the acquisition and development of a firm's human capital pool. Recruiting can provide a large pool of applicants and selection practices can influence the quality and type of skills that new employees possess. Training can also assist in developing human capital. Also, human resource practices can influence employee motivation by linking performance with incentives (Huselid, 1995).

Huselid (1995) employed a sample of 968 firms from a variety of industries with an average size of 4,412 employees. Thirteen human resource practices were used by Huselid (1995) to represent the domain of high performance work practices. The human resource practices were factor analyzed and two factors emerged. The first factor was named employee skills and organizational structures. This factor included job design, selection, training, and quality of work life human resource practices. The second factor was named employee motivation and included the human resource practices of formal appraisals, compensation, employee merit, and promotion decisions (Huselid, 1995). Huselid (1995) examined the relationship between bundles of high performance work practices and firm performance and the relationships between bundles of high performance work practices and individual performance and turnover. The findings by Huselid (1995) indicate that high performance work practices positively influence employee performance and reduce employee turnover. Also, high performance work practices were positively related to organization performance (productivity and financial) (Huselid, 1995).

Building upon the relationship between human resource practices and firm performance, Delery and Doty (1996) described three different modes of theorizing in strategic human resource management to better explain the relationship between human resource practices and organization performance. The three modes of theorizing are universalistic, contingency, and configurational. The universalistic perspective contends that some human resource practices are always better than others and that organizations should adopt these best practices. Thus, greater use of specific human resource practices will result in better performance (Delery & Doty, 1996). According to the contingency perspective the influence of human resource practices on organization performance is dependent on other aspects of the organization. For example, strategy may moderate the relationship between human resource practices and organization performance, thus, the relationship between human resource practices and organization performance is contingent upon the organization's strategy (Delery & Doty, 1996). Lastly, under the configurational perspective a holistic approach is taken, that is there is concern with how the pattern of multiple independent variables is related to a dependent variable rather than how individual independent variables are related to a dependent variable (Delery & Doty, 1996). According to Delery and Doty (1996), the configurational approach is consistent with notions of horizontal fit and vertical fit raised by Wright and McMahan (1992). Studies have examined the universal perspective (e.g., Huselid, 1995; Osterman, 1994; Terpstra & Rozell, 1993), the contingency perspective (e.g., Lengick-Hall & Lengick-Hall, 1988; Schuler & Jackson, 1987), and the configurational perspective (e.g., Doty & Glick, 1994; Meyer, Tsui & Hinings, 1993) individually.

Delery and Doty (1996) tested relationships among the universal, contingency, and configurational perspectives and organization performance. The sample used by Delery and Doty (1996) included 1050 banks. Seven human resource practices including: appraisals, job descriptions, job security, career opportunities, training, participating, and profit sharing were examined by Delery and Doty (1996). Supporting the universalistic perspective, three individual human resource practices, profit sharing, results-oriented appraisals, and employment security were each positively related to firm performance. Minimal support was found for the contingency perspective as only the interaction between strategy and appraisal explained a significant amount of variance in firm performance. Delery and Doty (1996) tested the configurational perspective by first classifying each bank according to its ideal employment system. The employment system classifications employed were market, internal, and middle of the road. Delery and Doty (1996) calculated the similarity between the organizations' employment systems and each of the ideal employment systems. The results showed that deviations from the internal and market employment systems were both related to organization performance. In addition to these findings, the market system was determined to be superior to the other two employment systems. Limited support was found for the configurational perspective. Overall the findings by Delery and Doty (1996) built upon previous work on the relationship between human resource practices and organization performance by indicating that different organizations can employ different perspectives in the use of human resource practices and the different perspectives on the use of human resource practices can influence organization performance.

Youndt, Snell, Dean, and Lepak (1996) examined the universal and contingency perspectives and their relationship with organization performance. They found greater support for the contingency perspective than for the universal perspective. This indicates that when human resource practices are aligned with an organization's strategy, the organization may experience greater performance.

As empirical work on the relationship between human resource practices and organization performance developed, methodological issues became a concern for researchers. In 2000 there was a debate across three articles on methodological issues in the human resource practice to organization performance link (Gerhart, Wright, McMahan, & Snell, 2000; Huselid & Becker, 2000; Gerhart, Wright, & McMahan, 2000). This debate centered on single response organizational surveys and the issues surrounding them. The main issue was whether a single respondent could provide an accurate assessment of the human resource practices of an entire organization. An issue associated with single response organizational surveys addressed in the debate was organization size. With large organizations it may be difficult for one person to accurately assess the human resource practices of a whole organization. Thus, it may be beneficial to collect information on human resource practices at the plant or department level. The debate also raised the issue of whether two respondents per organization would provide a more accurate assessment of the human resource practices of an organization than a single respondent would. One other issue raised in the debate is the items that are measured in surveys. The debate concerned how the items were worded. Based on how items were worded, the survey would measure human resource policy or

practice. Human resource policy concerns the human resource practices that an organization offers while human resource practice concerns the actual use of human resource practices. Overall, the debate attempted to extend research on the human resource practices to organization performance linkage by making it more methodologically rigorous.

With the extensive literature on the relationship between human resource practices and organization performance available, a meta-analysis of this relationship was conducted (Combs, Liu, Hall, & Ketchen, 2006). The meta-analysis found that individual high performance work practices were positively related to organization performance. It was also found that systems of high performance work practices positively predicted organizational performance and this relationship was stronger than the relationship for individual high performance work practices. The average correlation for the relationship between high performance work practices and organization performance was .20 (Combs et al., 2006). Thus, "20% of the utility available from predicting performance differences among organizations is given by high performance work practices" (Combs et al., 2006: 517). Lastly, studies of high performance work practices and firm performance showed larger effect sizes in manufacturing firms than in service firms (Combs et al., 2006).

In a recent study of organizational practices of Fortune 1000 firms, Gibson, Porath, Benson, and Lawler (2007) examined the influence that different organizational practices have on different measures of performance. Gibson et al (2007) examined three different organizational practices: information sharing, boundary-setting, and team

enabling and three different measures of performance: financial, customer service, and quality of goods and services. Five items were used to measure information sharing practices: the percentage of employees that had been provided information about corporate operating results, unit operating results, new technologies, business plans, and competitors' performance. Boundary-setting practices were measured with four items. The items asked whether performance improvement was guided by a clearly stated business strategy, clearly stated beliefs about what makes an organization effective, was implemented company-wide, and was guided by a mission and values statement. Team-enabling practices were measured with three items. The items asked respondents for the percentage of employees that participated in team-based organizational design and self-managed teams. Also, the percentage of employees that received team-building training was measured. Exploratory and confirmatory factor analyses were computed with the items and construct validity was tested to show that the items measured three distinct practices. Findings supported the hypothesis that different organizational practices would predict different performance measures. Information sharing practices were related most strongly to financial performance, boundary-setting practices were most strongly related to customer service, and team-enabling practices were most strongly related to quality of goods and services (Gibson et al., 2007).

Lastly, Becker and Huselid (2006) reviewed strategic human resource management and called for an increased focus on the "black box" between the human resource practices and organization performance relationship. Implementation was advocated as a new theoretical direction for strategic human resource management and

also as a way to further examine the "black box" (Becker & Huselid, 2006). It was suggested by Becker and Huselid (2006) that strategy implementation be examined as the mediating variable between human resource practices and performance. In a strategic human resource context, strategy implementation means that human resource practices will be based on the strategy of the firm (Becker & Huselid, 2006). Thus, human resource practices play a role in the implementation of different firm strategies.

The studies listed above show the development of strategic human resource management research on the relationship between human resource practices and organization performance. While there is still an interest in furthering research on the relationship between human resource practices and organizational performance, this study attempts to shift the focus of strategic human resource management to the human resource capital pool of firms and the influence that human capital may have on organization performance. The following section provides a brief description of human capital, followed by a review of the research that has examined human capital in a strategic human resource management framework.

2.4 Human Capital

Hitt, Bierman, Shimizu, & Kochhar (2001) defined human capital as the full range of knowledge, skills, and abilities an individual can use to produce a given set of outcomes. This current study focuses on human capital (KSAs) at the organization level and how organization level human capital influences performance.

Human capital has been measured in a variety of ways and has been related to several individual outcomes. Judge, Cable, Boudreau, and Bretz (1995) measured human capital at an individual level as education level, quality, prestige, and degree type. Each of these measures of human capital was positively related to financial success in one's career (Judge et al., 1995). In a meta-analysis of individual career success (Ng, Eby, Sorensen, & Feldman, 2005), several variables were included as measures of one's human capital. The measures included number of hours worked, work centrality, job tenure, organizational tenure, work experience, willingness to transfer, international work experience, education level, career planning, political knowledge and skills, and social capital. In the meta-analysis, each of these measures of human capital was positively related to career success and salary. Also, all measures of human capital except political knowledge and skill, and tenure were positively related to promotions (Ng et al., 2005).

Human capital has also been distinguished as firm-specific human capital and general human capital (Becker, 1965). Firm-specific human capital is the knowledge, skills, and abilities that are useful and valuable to a specific firm. General human capital is the knowledge, skills, and abilities that can be easily transferred between firms (Offstein, Gnyawali, & Cobb, 2005). Slaughter, Ang, and Boh (2007) found that jobs in the information technology industry that require a high amount of firm-specific capital have higher compensation than jobs in the information technology industry that require a low amount of firm-specific capital.

While the studies listed above examined human capital at an individual level, other studies have examined human capital at an organizational level. Pennings, Lee, and

Witeloostuijn (1998) examined the influence that organization level human capital has on organization dissolution. Human capital was measured by organization level proxies for organization tenure, industry experience, and graduate education. Each measure of human capital was negatively related to organization dissolution (Pennings, Lee, & Witeloostuijn; 1998). Hitt et al. (2001) examined human capital in law firms. Human capital was measured as quality of law school attended by partners and experience as partners in the current law firm. A U-shaped relationship was found between human capital and firm performance, such that the relationship between human capital and firm performance was initially negative, but turned positive with higher levels of human capital (Hitt et al., 2001). This suggests that early investments in human capital may not produce enough benefits to offset the costs, however, overtime as employees gain experience these investments may result in large benefits to the organization (Hitt et al., 2001). The studies listed above reviewed some of the findings in the human capital literature. The next section specifically reviews how human capital has been examined in strategic human resource management research.

2.4.1 Human Capital in Strategic Human Resource Management

As mentioned earlier the resource-based view of the firm has been used extensively in strategic human resource management research (McMahan et al., 1999; Wright et al., 2001). Wright, McMahan, and McWilliams (1994) used the resource-based view of the firm to describe the conditions under which human capital may be a source of sustained competitive advantage. Wright et al. (2001) stated, “in applying the concepts

of value, rareness, inimitability, and substitutability, it is argued that human resource practices could not form the basis for sustainable competitive advantage since any individual human resource practice could easily be copied by competitors. Rather, it is proposed that the human resource pool has a greater potential to constitute a source of sustainable competitive advantage" (pg. 703).

Wright et al. (1994) applied the concepts of the resource-based view of the firm (value, rareness, inimitability, and non-substitutability) to human resources to provide circumstances under which human resources may be a source of sustained competitive advantage for organizations. Human resources may provide added value to a firm because the supply of labor is heterogeneous, thus people possess different levels of knowledge, skills, and abilities. Also, the demand for labor is heterogeneous which means that different jobs require different knowledge, skills, and abilities (Steffy & Mauer, 1988). Based on the levels of knowledge, skills, and abilities needed for a certain job, individuals with different types and levels of knowledge, skills, and abilities may perform differently in similar jobs. Thus, individuals' contributions to firms may differ which argues that human resources may create value for firms (Wright et al., 1994).

Human resources are rare when jobs require knowledge, skills, and abilities which allow for differences in individual contributions. Under these conditions knowledge, skills, and abilities should be normally distributed in the population and high quality human resources would be rare (Wright et al., 1994). Wright et al. (1994) used firm cognitive ability as an example of how human resources could be rare. Cognitive ability has been shown to have a strong positive relationship with individual job performance

(Hunter & Hunter, 1984). If cognitive ability is normally distributed in the population then there would be fewer individuals with higher levels of cognitive ability, thus, making higher levels of cognitive ability rare. If organizations are able to acquire human resources with higher levels of cognitive ability then they would have a resource that is rare.

In order for human resources to be a source of sustained competitive advantage they must also be inimitable. The unique history of an organization such as its culture and norms may make human resources inimitable (Wright et al., 1994). The path an organization has taken through history may influence the human capital that the organization acquires and develops. Also, the unique history of an organization which includes a firm's culture and norms may influence how people work together in the organization which would be difficult for other organizations to imitate. Human resources may also be a source of causal ambiguity. Team production can present causal ambiguity because with teams the whole is greater than the sum of its parts (Wright et al., 1994). Thus, it is difficult to determine what exactly it is about a team that leads it to perform at a higher level. Social complexity may arise from the communications across different departments in organizations, from employees' contact with customers, and many other situations. Complex social situations may constitute a competitive advantage for an organization because social situations cannot be easily recreated (Wright et al., 1994).

Lastly, for a human resource pool to be a source of a sustained competitive advantage, it must not have substitutes. Wright et al. (1994) used an example of whether

resources, such as technology have the potential to offset advantages gained through human capital. In this situation human resources would be able to be transferred across technologies. Thus, in the short-term human resources may have substitutes, however in the long-term if an organization has human resources with higher levels of human capital, the human resources would not easily be substituted (Wright et al., 1994). Wright et al. (1994) provided a conceptual analysis for the conditions under which human resources could be a source of sustained competitive advantage and subsequent studies have begun to empirically test the contributions that human resources make to organization performance.

Wright, et al. (1995) used NCAA men's basketball teams to study human capital in a strategic human resource management framework. Wright et al. (1995) examined three different basketball strategies: finesse, power, and speed along with 16 different basketball skills. It was found that coaches place importance on different skills in recruiting players based on coaches' preferred strategies. Thus, the strategy that a firm employs appears to influence the types of knowledge, skills, and abilities sought by a firm. Wright et al. (1995) also found that when a team implements a strategy that is inconsistent with its coach's preferred strategy, the team exhibited lower performance than when a team implements a strategy that is consistent with the coach's preferred strategy. A team may implement a strategy that is inconsistent with its coach's preferred strategy because the players on the team may not have the knowledge, skills, and abilities needed to implement the coach's strategy. This may particularly be the case when a team hires a new coach. In this situation it may take time for the coach to recruit players to the

team with the knowledge, skills, and abilities needed for the coach's strategy or for the coach to develop players that are currently on the team. As the coach recruits and develops players that are consistent with the coach's strategy, the team may perform at a higher level. Lastly, Wright et al. (1995) found strategy moderated the relationship between human resource capabilities and team performance. Thus, when a team has players with knowledge, skills, and abilities that are consistent with the team's strategy, the team performs at a higher level than if the knowledge, skills, and abilities of the players are inconsistent with the team's strategy. Wright et al. (1995) demonstrated the importance of human resources to firm performance and the importance of consistency between the knowledge, skills, and abilities of the human capital pool and a firm's strategy.

Lepak and Snell (1999) also placed an emphasis on human capital and theorized a human resource architecture of four different employment modes: internal development, acquisition, contracting, and alliance. The internal development mode is characterized by human resources that have firm specific skills, are highly unique, and have high value (Lepak & Snell, 1999). In the acquisition mode, organizations acquire human resources that do not require further investment. With the acquisition mode the human capital has low uniqueness and high value (Lepak & Snell, 1999). The contracting employment mode is utilized when organizations contract work with individuals outside of the organization or outsource functions. In this case the human capital has low uniqueness and value (Lepak & Snell, 1999). Lastly, the alliance mode is used when organizations form alliances with other organizations to utilize human capital. With the alliance mode,

human capital is highly unique and has low value. The framework proposed by Lepak and Snell (1999) provides a way to study different employment arrangements used by organizations to allocate work.

Lepak and Snell (2002) empirically tested their human resource architecture. In the study the internal development mode was renamed knowledge-based employment and the acquisition mode was renamed job-based employment. Lepak and Snell received surveys from 206 senior executives, senior human resource managers, or line managers representing 148 firms. On each survey, Lepak and Snell (2002) defined each of the four employment modes and asked each respondent to complete the survey for only one employment mode that was specified by Lepak and Snell (2002). Lepak and Snell (2002) found that human capital value was highest for knowledge-based and job-based employment, next highest for alliances, and lowest for contract work. Also, the uniqueness of knowledge-based employees was significantly higher than the uniqueness of contract workers and job-based employees. The findings by Lepak and Snell (2002) demonstrate differences in human capital based on the different employment modes that an organization may choose to employ. Thus, organizations may seek different forms of human capital based on their employment strategy. While it is important to examine how human capital can compliment an organization's strategy it is also important to examine the influence that human capital can have on organization performance.

Within a strategic human resource framework, Carmeli and Schaubroeck (2005) examined human capital and the distinctive value of human capital and their relationships with organization performance. Carmeli and Schaubroeck (2005) measured human

capital by having the CEO or a top manager at each organization in the study assess the organization's perceived human capital and the organization's perceived distinctive value of its human capital. Human capital was measured as a perception of levels of education, training, work experience, and skills of the entire organization. Distinctive value of an organization's human capital was assessed with a four item scale (Carmeli & Schaubroeck, 2005). Thus, only perceptions of human capital and perceptions of the value of human capital were measured, not actual human capital nor the actual value of human capital. Carmeli and Schaubroeck (2005) found a significant interaction between perceptions of human capital and perceptions of human capital value in predicting organization performance. Thus, higher levels of perceived human capital along with higher levels of perceived value of human capital resulted in greater organization performance than when perceived human capital and perceived value of human capital were low.

Similarly, core employees have been found to have a positive influence on organizations (Lopez-Cabrales, Valle, & Herrero, 2006). Specifically organizations that utilize the most valuable and unique core employees have higher capability (Lopez-Cabrales, 2006). Most recently, Takeuchi, Lepak, Wang, and Takeuchi (2007) examined the mediating role that human capital plays between the high performance work system and organization performance relationship. Takeuchi et al. (2007) surveyed managers and employees of Japanese organizations to gauge the usage of high performance work practices. To assess organizational human capital, managers completed a human capital scale assessing general human capital such as employee skill level, creativity, and

propensity to develop new ideas. Takecuchi et al. (2007) found that this measure of collective human capital was positively related to organization performance and that collective human capital mediated the relationship between high performance work systems and organization performance.

2.5 The Human Capital Pool as Knowledge, Skills, and Abilities

Past research that has examined human resources' knowledge, skills, and abilities and their relationship with performance has tended to do so at an individual level. Individuals' general cognitive ability and its relationship with performance outcomes across a variety of tasks has been widely studied (e.g. Hunter & Hunter, 1984; Martocchio & Judge, 1997; Phillips & Gully, 1997; Ree, Earles, & Teachout, 1994). O'Reilly and Chatman (1994) defined general cognitive ability as "representative of the general population and refers to individual differences in tasks or pursuits that demand mental effort, such as abstraction, rule, inference, generalization, and manipulating or transforming problems" (p. 603). In a study of airmen in 82 different jobs, Ree and Earles (1991) found that general cognitive ability was the best predictor of job performance. Similarly, McHenry (1990) found general cognitive ability to be the best predictor of an Army job performance measure. General cognitive ability has also been found to be related to greater career success (Dreher & Bretz, 1991; O'Reily & Chatman, 1994).

How general cognitive ability may produce improved job performance and career success has also been studied. Hunter (1986) found that higher levels of general cognitive ability enable individuals to acquire job knowledge and this increased

knowledge is related to greater job performance. Theories of knowledge acquisition predict that cognitive ability affects job performance because it accounts for the pace and completeness with which individuals acquire information (Dreher & Bretz, 1991). It is recognized that cognitive ability predicts performance because it captures the ability of individuals to set priorities and be innovative in novel situations (Hunter, 1986). While general cognitive ability is an important predictor of job performance, it is not specific to a task or situation.

Different jobs have different profiles of knowledge, skills, abilities that are required and consequently different people may complement jobs differently (Wise, McHenry, & Campbell, 1990). Typically job analysis is used to determine the knowledge, skills, and abilities necessary for a specific job. Job analysis provides a foundation for human resource practices, including, recruitment, selection, training, and performance appraisal (Van Iddekinge, Putka, Raymark, & Eidson, 2005). The knowledge, skills, and abilities that are identified through a job analysis for a specific job may be used by firms as criteria for selection. Thus, there are knowledge, skills, and abilities that individuals should possess prior to entry into a job (Prien, 1977). If there are knowledge, skills, and abilities that are firm specific, training may assist employees in gaining the needed knowledge, skills, and abilities (Prien, 1977; Wooten, 1993). Also, when individuals possess the required knowledge, skills, and abilities for a job, they tend to perform better than when individuals do not possess the required knowledge, skills, and abilities (Edwards, 1991; O'Reilly, Chatman, & Caldwell, 1991). Along these same lines, Neuman and Wright (1999) conducted a job analysis to determine the task specific

knowledge, skills, and abilities needed for a human resource position and found that individuals with greater levels of task specific knowledge, skills, and abilities performed at a higher level.

Another area examined centers around the knowledge, skills, and abilities necessary for teamwork. Literature in this area has examined the knowledge, skills, and abilities necessary to work in teams. Stevens and Campion (1994) presented the knowledge, skills, and abilities needed for success as a team member in a conceptual article. The team work knowledge, skills, and abilities proposed by Stevens and Campion (1994) were then empirically tested by Stevens and Campion (1999). The teamwork knowledge, skills, and abilities developed by Stevens and Campion (1994) theorized that conflict resolution, collaborative problem solving, communication, goal setting and performance management, and planning and task coordination were important team member KSAs linked to high performing teams. Stevens and Campion tested this linkage and reported these KSAs were positively related to supervisory and peer ratings of teamwork and overall job performance. Similarly, McClough and Rogelberg (2003) found higher scores on the teamwork knowledge, skills, and abilities test developed by Stevens and Campion related to higher individual effectiveness in teams. In a study of teamwork skills training, Ellis, Bell, Ployhart, Hollenbeck, & Illgen (2005) found that individuals that received teamwork training demonstrated higher levels of knowledge regarding teamwork competencies and greater proficiency in planning, task coordination, collaborative problem-solving, and communication.

Up to this point the focus has been placed knowledge, skills, and abilities at the individual level. Next, attention will be turned to knowledge, skills, and abilities and outcomes at the group or team level. The following studies examined team standing on specific KSAs and various indices of team performance.

Studies at the team level have tended to focus on personality traits and general cognitive ability. Barry and Stewart (1997) reported that the team mean level of conscientiousness was not related to team performance, task focus, or team cohesion. The team mean level of extraversion was negatively related to team task focus, but teams with a moderate proportion of extraverted members performed better than teams with a greater or lesser proportion of extraverted members (Barry & Stewart, 1997). On the other hand, Barrick, Stewart, Neubert, and Mount (1998) reported the mean team level of team conscientiousness was positively related to team performance. Mean level of agreeableness was not related to team viability. For extraversion, teams with a higher mean level of extraversion received higher ratings for team viability. Similarly for emotional stability, teams with a higher mean level of emotional stability received higher ratings for team viability (Barrick et al., 1997). In a meta-analysis, Bell (2007) found that the team level personality traits of conscientiousness, agreeableness, extraversion, emotional stability, and openness to experience had little to no relationship with team performance in lab studies. However, in field studies, team level measures of conscientiousness, agreeableness, and openness to experience were related to team performance (Bell, 2007).

Team level general cognitive ability and its relationship with team performance has also been examined. Hill (1982) found that higher team member cognitive ability was positively related to performance of teams of systems analysts. Similarly, Tziner and Eden (1995) found that crews with higher ability soldiers exhibited higher performance and Williams and Sternberg (1988) found team mean level of intelligence to be positively related to team performance. In addition to personality traits, Barrick et al. (1998) also examined team level general cognitive ability and found that team level cognitive ability was positively related to team performance and team viability. Meta-analyses have found results similar to the studies listed above with regard to the relationship between team level general cognitive ability and team performance. Stewart (2007) in a meta-analysis found team level general cognitive ability to be positively related to team performance. Bell (2007) in a meta-analysis also found a positive relationship between team level general cognitive and team performance. While the positive relationship between team level cognitive ability and team performance has been established, little research has been conducted on team level task specific abilities and team performance.

Neuman and Wright (1999) conducted a job analysis in a human resources department of a firm to determine the task specific knowledge, skills, and abilities needed to perform the job. After determining the knowledge, skills and abilities needed for the job, Neuman and Wright aggregated individuals' scores in 79 teams on the task specific knowledge, skills, and abilities to the team level. Neuman and Wright (1999) determined that the tasks the human resources teams were performing were conjunctive in nature, thus, according to Steiner's (1972) typology, they used the lowest score of each member

in each group on the task specific knowledge, skills, and abilities measure as the group score. They found teams with higher scores for their lowest scoring member exhibited higher performance (Neuman & Wright, 1999). In the next chapter hypotheses to be tested in this study are described along with the theoretical foundation for these hypotheses. Following the Wright and McMahan (1992) model of strategic human resource management, the hypotheses concern relationships among human resource capital, overlapping tenure, human resource behaviors, and performance.

CHAPTER 3

HYPOTHESIS DEVELOPMENT

3.1 Human Resource Capital

As previously stated, according to the resource-based view of the firm, resources that are valuable, rare, inimitable, and nonsubstitutable can create sustained competitive advantages for organizations (Barney, 1991). Human resources have the potential to fulfill the requirements of the resource-based view of the firm and create a sustained competitive advantage for an organization (Wright et al., 1994). In a survey of chief executive officers, Hall (1992) found that chief executive officers rated employee-know-how as one of the most important factors that contribute to organization success. Employee know-how includes employees' knowledge, skills, and abilities and is defined as the intangible resource that results in distinctive competencies that enable an organization to be successful (Hall, 1992). Thus, it is important for organizations to select and retain human resources with knowledge, skills, and abilities necessary to enable the organization to be successful. Boxall (1998) stated that "the fundamental priority of human resource strategy in an organization is to secure and maintain the kind of human resources that are necessary for the organization's viability" (p. 266).

Employees assist organizations in increasing firm performance and creating a sustained competitive advantage (Wright et al., 1994). Top managers may develop an

organization's strategy and mid-level managers may implement the strategy, but it is the employees who actually produce the organization's goods or services that are ultimately responsible for the success of the strategy. If employees do not posses the necessary abilities to execute an organization's strategy it is unlikely that the firm's strategy will be successful (Wright et al., 1995). Firms must then focus on hiring, training, and motivating employees that are directly responsible for producing a firm's goods or services (Bowen & Lawler, 1992).

As mentioned previously people possess different levels of human capital and this human capital is understood to be normally distributed in the population (Wright et al., 1994). Thus, hiring people with higher levels of human capital may be difficult and costly for firms. Firms that are able to hire people with higher levels of human capital may have a competitive advantage over other firms. General cognitive ability is one way the literature has measured human capital. General cognitive ability has been measured in a variety of ways including GMAT scores (O'Reilly & Chatman, 1994), Wonderlick (Barrick et al., 1998), EIMP Battery, and Miller's Analogies Test (Dreher & Bretz, 1991) among others. General cognitive ability has been found to have a positive relationship with individual job performance (e.g., Hunter & Hunter, 1984; Dreher & Bretz, 1991; Schmidt, Hunter, & Pearlman, 1981). Similarly when general cognitive ability is aggregated to the team level it is positively related to team performance (e.g., Barrick, et al., 1998; Bell, 2007; Stevens & Campion, 1994; Tziner & Eden, 1985; Williams & Sternberg, 1988)

While studies show that general cognitive ability has a positive relationship with performance, general cognitive ability is not specific to particular knowledge, skills, and abilities needed for a certain task or situation (O'Reilly & Chatman, 1994). In a study of task specific knowledge, skills, and abilities, Neuman & Wright (1999) found higher levels of task specific knowledge, skills and abilities to be related to higher team performance. Additionally, Neuman and Wright (1999) examined a conjunctive task, thus when aggregating individual level scores on the measure of task specific knowledge, skills, and abilities, the score of the lowest scoring member on each team was used as the team level measure (Steiner, 1972).

As mentioned previously, in a strategic human resource management framework Carmeli and Schaubroeck (2005) found that human capital and the distinctive value of human capital were positively related to organization performance. Similarly, Lopez-Cabrales et al. (2006) found core employees' human capital (KSAs) was positively related to organization performance. While these studies demonstrate the positive effects of human capital at the organization level, these studies employed general measures of human capital and one rater per organization assessed the human capital of an entire organization. More recently, Takeuchi et al. (2007) used a general measure of human capital to assess human capital at the organization level. While Takeuchi et al. (2007) employed a general measure of human capital; they had multiple raters in each organization assess the human capital of the entire organization. Wright et al (1995) asked coaches to evaluate their team on a number of task specific characteristics that were then combined into three main factors. Wright et al. (1999) asked refinery managers

to evaluate the quality of their operator workforce in terms of both their skills and their motivation. Hitt et al. (2001), on the other hand, were able to use more objective assessments of human capital by assessing the quality of law school attended by partners and the experience of those partners.

Compared with previous studies which used a general measure of human capital the current study uses a task specific measure of human capital that was designed to be linked to the specific task functions that need to be performed. In contrast to previous studies where members of the participating organization assessed the human capital of its own participants, an organization external to the participants in this study assessed aspects of the human capital of the participants. With these differences in mind the current study examines NCAA men's basketball teams, which are highly interdependent work units. The many players on a basketball team, although with different roles must work together to determine the collective success of the team. The use of NCAA basketball teams enables the use of a industry accepted measure of task specific skills by an external organization based the input of multiple raters rather than single raters as found in the studies by (Carmeli and Schaubroeck, 2005; Lopez-Cabrales et al., 2006). Additionally, by examining basketball teams, team level human capital is examined which has been less frequently examined in the previous literature.

Measuring task specific human capital may constitute a stronger test of the resource-based view, as specific human capital may have a greater potential to be valuable, rare, unique, and non-substitutable than general human capital. Different jobs require different types and levels of human capital and individuals possess different types

and levels of human capital. Therefore, individuals may make different contributions to different jobs. If a firm is able to acquire and develop individuals with the human capital necessary for the task at hand, the human resources may be an added source of value for the firm (Wright et al,. 1994). Human resources with high levels of specific human capital may also be rare. Few individuals may possess the type and level of human capital needed for a task, thus obtaining these individuals may difficult and costly for firms (Hitt et al., 2001). Specific human capital may also be inimitable as other firms may not know exactly what it is about the human capital of another firm and the environment in which the human capital operates that make the firm successful (Wright et al., 1994). Therefore, the specific human capital of one firm may be difficult to duplicate at another firm (Hatch & Dyer, 2004). Lastly, specific human capital may be non-substitutable. Due to the nature of human capital, it may be difficult to find a resource that could substitute for the human capital needed for the specific task being performed (Wright et al., 1994).

Consequently:

Hypothesis 1: Players' human capital will be positively related to performance.

Wright et al. (1994) stated that most of the writing on human resources as a source of sustained competitive advantage has focused on top managers, or top management teams. Studies such as Guthrie and Olian (1991) have examined the relationships between business strategy and manager selection. The relationship between the characteristics of managers and their effectiveness based on an organization's strategy

has also been examined (Gupta & Govindarajan, 1984). There has also been empirical work on the relationship between managers' skills and organization strategy (e.g., Bantel & Jackson, 1989; Hitt & Tyler, 1992; Michael & Hambrick, 1992; Wiersma & Bantel, 1992). Other studies have examined managerial quality (e.g., Porter & Scully, 1982; Clement & McCormick, 1989; Kahn, 1993), manager succession (e.g., Allen et al, 1979; Brown, 1982; Pfeffer & Davis-Blake, 1986), and managers' allocation of resources (Hansen, Perry, & Reese, 2004).

Castanias and Helfat (1991) stated top management may be a source of competitive advantage as it is valuable, rare, inimitable, and non-substitutable. Research on top management has attempted to identify the traits and skills of top managers that make them successful (e.g., Hampton, Summer, & Weber, 1987; Katz, 1974). Castanias and Helfat (1991) discussed three types of skills that can define the management function. They are: generic skills, type of business or industry-related skills, and firm-specific skills. Research suggests that there are skill differentials between superior and not so superior managers, both in the type and degree of skills possessed (Castanias & Helfat, 1991). Superior top management skills may not only produce greater performance, but performance that may persist for an extended period of time (Castanias & Helfat, 1991).

Similar to employees, different managers may possess different levels of knowledge skills, and abilities. Managers with higher levels of general cognitive ability tend to be successful in their careers (O'Reilly & Chatman, 1995). While managers' human capital may assist them in their careers, managers' human capital may also help

organizations to perform at a higher level. Empirical studies show that managerial quality has a positive relationship with organization performance. Studying professional baseball, Porter and Scully (1982) found manager efficiency (quality) to be associated with greater performance. Porter and Scully (1982) measured managerial efficiency as the extent to which a manager was able to transform the input of players' skills into an output of wins. Managers play important roles in organizations including making a wide variety of technical and strategic decisions that may impact the performance of organizations. Managers also play a role in training and motivating employees (Porter & Scully, 1982). If managers are able to efficiently utilize the human resources of an organization, the organization may perform at a higher level. In another study of professional baseball, teams with high-quality managers tended to have higher winning percentages and the players on the teams with high-quality managers tended to play better (Kahn, 1993). Quality of management was measured by Kahn (1993) as predicted salary based on a formula that included managerial experience and winning percentage as a manager.

Most relevant to this study, quality of management in NCAA basketball was positively related to team winning percentage (Clement & McCormick, 1989). Clement and McCormick examined the amount of time that players played in games and how head coaches allocated playing time. It was found that head coaches who base their playing time decisions on player performance were more likely to win. Thus, managers that have the abilities to recognize talent and utilize it properly can positively impact the performance of an organization (Clement & McCormick, 1989). Most recently, Goodall,

Kahn, and Oswald (2008) examined NBA coaches' expert knowledge as assessed by the number of years the coach played in the NBA and the number of times that coach was named to the NBA all-star team. They found that the coaches' expert knowledge was associated with their team's success. The studies listed above demonstrate that organizations that employ leaders with higher levels of human capital may exhibit greater performance. Thus, the following is hypothesized.

Hypothesis 2: Head coaches' human capital will be positively related to performance.

In the previous hypotheses, the human resource pool was distinctly divided into players and head coaches and the individual influences that both players and head coaches may have on performance was examined. This section discusses the entire human resource capital pool made up of both employees and managers. The level of human capital of both players and head coaches may have an interactive influence on organization performance. Organizations with leaders that have higher levels of human capital may be able to effectively utilize the human capital in their organizations (Hitt et al., 2001). Therefore, if leaders have human resources with higher levels of human capital and the leader is able to effectively utilize the human capital, greater performance may result.

In a study of Major League Baseball teams, Kahn (1993) examined the influence that the quality of a manager had on players' performance. He found that when a high-quality manager runs a team, players' average performance was greater than when the

team had a low-quality manager. Thus, leaders can have an influence on the performance of human resources. If a manager has higher levels of human capital, he or she may be able to improve the performance of his or her employees. Thus, a high quality manager can have a positive influence on the performance of an organization. High quality managers may be able to develop employees and utilize employees' human capital in a way that creates positive outcomes.

Using a student sample and conducting a laboratory study, LePine, Hollenbeck, Ilgen, & Hedlund (1997) examined the influence that team members' general cognitive ability had on teams' decision-making accuracy. In each team, one student was classified as the leader and the remaining students in the team were classified as staff. Based on the task that the teams were performing, LePine et al. (1997) determined that a conjunctive model of aggregation should be employed. Thus, to aggregate measures of general cognitive ability, the lowest score on the general cognitive ability measure by a team member was used for the team level measure (Steiner, 1972). LePine et al. (1997) found teams that had higher scores for the lowest scoring staff member on general cognitive ability had higher decision-making accuracy. Also, teams with leaders that had a higher level of general cognitive ability had greater decision-making accuracy. LePine et al. (1997) also found that leader general cognitive ability interacted with staff general cognitive ability to predict team decision-making accuracy. Teams that had leaders and staff with higher levels of general cognitive ability had greater team decision-making accuracy than (LePine et al., 1997).

This finding is important to the current study because the current study examines the interaction of players' and head coaches' human capital and its relationship with performance. However, the current study does differ from LePine et al. (1997) in that it uses a task specific measure human capital instead of a measure of general cognitive ability. The studies listed above and especially the finding of LePine et al. that employees' and managers' cognitive ability interact to positively predict team decision making accuracy/performance, lead to the following hypothesis.

Hypothesis 3: Head Coaches' human capital will moderate the relationship between players' human capital and performance. The relationship between players' human capital and performance will be stronger when there are higher levels of head coaches' human capital compared to when there are lower levels of head coaches' capital.

3.2 Social Capital

Social capital is an asset embedded in relationships of individuals, communities, networks, or societies (Burt, 1997; Coleman, 1990; Nahapiet & Ghoshal, 1998). Social capital resides in the relationships between people and among people (Nahapiet & Ghoshal, 1998) and unlike other forms of capital (e.g. human capital), social capital is owned jointly by the parties in the relationship (Burt, 1992). Social capital also allows outcomes to be achieved that would be difficult to achieve without it or that could only be achieved with extra cost (Nahapiet & Ghoshal, 1998). An outcome of social capital is that

it may increase the efficiency of action (Nahapiet & Ghoshal, 1998). For example, social capital in the form of trust may diminish the probability of opportunism and may reduce costly monitoring processes, thus reducing transaction costs (Putnam, 1993). Social capital may also facilitate creativity and learning (Nahapiet & Ghoshal, 1998). Researchers have found that social capital encourages cooperative behavior and thus, facilitates new forms of association and innovative organization (Fukuyama, 1995, Putnman, 1993).

Recent empirical work has examined the relationship between social capital and performance. Shaw, Duffy, Johnson, and Lockhart (2005) examined the influence of turnover and social capital losses on firm performance. They found the relationship between social capital losses and firm performance to be moderated by the turnover rate. The results showed that when turnover and social capital losses were low, firm performance was high and as the losses increased, firm performance decreased. The incremental negative effect of social capital losses grew less pronounced as the losses increased (Shaw et al., 2005). In another study of social capital, Subramaniam and Youndt (2005) found that social capital positively related to firm innovation. Finally, Oh, Chung, and Labianca (2004) examined group social capital which is the configuration of members' social relationships within a group and found that it positively influenced group performance.

More specific to this study is the concept of organizational social capital which is defined as "a resource reflecting the character of social relations within the firm" (Leana & Van Buren, 1999: 538). "Organizational social capital is realized through members'

levels of collective goal orientation and shared trust, which create value by facilitating successful collective action" (Leana & Van Buren, 1999: 538). Leana and Vann Buren (1999) developed a model of organizational social capital and proposed that organizational social capital is made up of two components: associability and trust.

Associability is defined as "the willingness and ability of participants in an organization to subordinate individual goals and associated actions to collective goals and actions" (Leana & Van Buren, 1999: 541). Associability goes beyond just the ability to interact socially with others as it requires the subordination of individual goals for group goals (Leana & Van Buren, 1999). Associability is both task centered and goal driven as once collective goals are set, work must be coordinated among members to ensure that the goals are achieved. The second component of organizational social capital is trust, which is a willingness to be vulnerable (Rousseau, Sitkin, Burt, & Camerer, 1998). Trust is both an antecedent to and a result of collective action. For example, trust is important for people to work on common projects and achieve a desired outcome and trust may be a result of successful collective action, when a group is successful it is more likely to exhibit higher trust (Leana & Van Buren, 1999). It was concluded that both associability and trust must be present in order for social capital to exist (Leana & Van Buren, 1999).

Leana and Van Buren's (1999) model of organizational social capital proposed that organizational reciprocity norms, specified roles, and stable relationships all lead to the creation of organizational social capital. Organizational norms that encourage teamwork, shared learning, and high-performance work can influence the formation of social capital (Leana & Van Buren, 1999). Organizational social capital can be built over

time by the organization selecting and rewarding people that share its values and goals (Bigley & Pearce, 1998; McNight, Cummings, & Chervany, 1998). Organizations can also encourage social capital by socializing new members to the organizational values of working collectively (Louise, 1980). By specifying roles, organizations can also encourage social capital (Leana & Van Buren, 1999). Social capital may develop in organizations where a set of rules or procedures define the social structure of the organization in terms of positions rather then people (Coleman, 1990). Thus, stability is achieved through highly specified roles and procedures for monitoring individuals' compliance with the roles (Leana & Van Buren, 1999).

Most specific and important to the current study is the proposition that social capital is influenced by the stability of relationships among people. By promoting stability among employees and having flexibility in how employees are deployed within these relationships, organizations may be able to increase their social capital (Leana & Van Buren, 1999). It has been noted that when organizations encourage stable job tenure and reinforce associability and trust, they may perform better than organizations that only focus on individual contributions (Frank & Cook, 1995). For the purpose of this study, the focus on the stability of relationships is accomplished by examining the amount of time that team members have worked with one another and the amount of time that they have worked with the head coach. These are measured by focusing on the overlapping tenure of team members and the overlapping tenure of team members with their head coach.

3.3 Overlapping Tenure As Social Capital

3.3.1 Overlapping Tenure

Some studies of team tenure have found outcomes associated with longer team tenure that may not be desirable to organizations. These findings include commitment to the status quo (Michel & Hambrick, 1992), reduced learning (Hambrick, 1995), reduced risk-taking (Finkelstein & Hambrick, 1990), and maintenance of past business patterns (Barker & Patterson, 1996). Finkelstein and Hambrick (1990) found longer tenured teams tended to not engage in as much strategic experimentation and change as shorter tenured teams. Also, longer tenured teams tended to pursue strategies that were imitative of other firms while shorter tenured teams tended to pursue novel strategies (Finkelstein & Hambrick, 1990).

While some studies listed above demonstrate some less desirable outcomes of longer team tenure (e.g., Finkelstein & Hambrick, 1990; Hambrick, 1995; Michel & Hambrick, 1992), other studies have found favorable outcomes associated with longer team tenure. Watson, Michaelsen, and Sharp (1991) found that as teams of students worked together longer they performed better. In fact, over time teams performed better as a whole than the best team member in each team (Watson et al., 1990). Similarly, Berman, Down, and Hill (2002) in a study of NBA teams found that experienced teams performed at a higher level. In a study of continuing teams and one-shot teams, Harrison et al. (2003) found that continuing teams performed better than one-shot teams. Also, teams with more experienced members accumulated a greater amount of human capital

than teams with less experienced members, which may allow teams with greater experience to out perform teams with less experience (Timmerman, 2005). Experienced teams also accumulated knowledge about teamwork and developed team schemas which improved team performance (Rentsch & Klimoski, 2001).

Theoretically, when people work together over a sustained period of time, they can develop social capital which may allow them to perform at a higher level. Social capital is the goodwill and resources made available to a person through reciprocal, trusting relationships (Adler & Kwon, 2002; Arregle, Hitt, Sirmon, & Very, 2007). Social capital is important because it facilitates information flow, knowledge creation (Burt, 2000; Nahapiet & Ghoshal, 1998), and improves creativity (Perry-Smith & Shalley, 2003). Also, when people work together for a sustained period of time, the social capital that is accumulated leads to improved coordination of activities, decision making, and implementation of decisions (Hitt, Lee, & Yucel, 2002).

As individuals work together, they are able to gain knowledge about each other and the tasks they are performing. When individuals are able to work together for a sustained period of time they may develop social capital which allows them to develop knowledge that is embedded within, available through, and utilized by interactions among individuals (Nahapiet & Ghoshal, 1998). Therefore, group knowledge is acquired over time as individuals work together (Berman et al., 2002). When people work together over a period of time and develop social capital, the richness of information shared and interactions among them may be enhanced. Thus, social capital may allow

members of an organization to draw upon prevailing knowledge and refine their evolving body knowledge (Subramaniam & Youndt, 2005).

One way in which individuals can develop social capital to help facilitate knowledge is through shared team experiences. According to the resource-based view, valuable resources may be viewed as stocks of assets that are accumulated over time with experience (Dierickx & Cool, 1989). Following the resource-based view, as individuals work together, their knowledge will increase and individuals will gain experience that allows them to construct patterns to help synchronize their actions (Berman et al., 2002). For example, in a study of NBA teams, Berman et al. (2002) found that as NBA players played together longer their teams tended to win more games. Thus, as individuals work together they gather shared experiences which may allow them to perform at higher levels. Berman et al. (2002:16) stated, "other things being equal, high turnover in a group will disrupt the ability of members to draw upon experientially constructed schemata in order to operate in a synchronous fashion."

Similarly, Pelled, Eisenhardt, and Xin (1999) found a positive relationship between shared experience and group performance. Thus, through shared experiences individuals are able to learn about the diverse perspectives of other individuals, which in turn leads to a more effective group (Pelled, Eisenhardt, & Xin, 1999). This idea is important to the sample of NCAA men's basketball teams used in the current study. Basketball teams have a variety of players that have different skills that allow them to play different positions on the basketball court. Over time, as players work together, they

may be more likely to learn how their skills complement each other and share knowledge of the game with each other that may facilitate greater functioning of the team.

It then becomes important for organizations to retain individuals with the proper knowledge, skills, and abilities and allow them to work together for longer periods of time. It may take time for individuals to form relationships with each other which may allow them to work together effectively. Thus, as individuals accumulate shared experiences they may be able to coordinate their activities better, share knowledge, learn, and therefore perform at higher levels.

To measure social capital, the current study will assess the overlapping tenure of players on a basketball team. Overlapping tenure is the amount of time individuals have worked together towards common performance outcomes. Most studies that have examined team tenure have simply taken the tenure of each individual on a team and averaged them to arrive at a measure of team tenure (e.g., Boeker, 1997; Johnson, Hoskisson, & Hitt, 1993; Sutcliffe, 1994; Wiersema & Bantel, 1992). Different from previous studies, this study examines overlapping tenure. A detailed explanation of how overlapping tenure is measures is described in the Methods section.

Hypothesis 4: Player overlapping tenure will be positively related to performance.

When players and head coaches are able to work together for a sustained period of time, greater firm performance can occur. When there is turnover the performance of an organization may suffer because the newly hired individuals need time to learn about the

procedures, personalities, relationships, and subcultures of the firm (Groysberg, Nanda, & Nohira, 2004). Thus, it is important for employees and managers to be able to work together for a sustained period of time. For example, when a stock analyst switches firms, his or her group at the new firm performs better when the stock analyst is able to bring his or her team of research analysts, salespeople, and traders than when a stock analyst switches organizations alone (Groysberg et al., 2004). When employees and managers have relationships that span across functions in firms it can lead to greater performance. For example, investment firms may have greater performance when their analysts are supported by high performing research and sales teams. Coworkers are important to stock analysts because they can help spark ideas that stimulate team production (Groysberg et al., 2004). In a similar study, when former GE executives took CEO positions at other organizations and brought a team of three or more with them from GE, the new organization performed better than when the GE executives were not able to bring anyone along with them to the new organization (Groysberg, McLean, & Nohira, 2006). From both of these examples it can be seen that organizations may perform better when employees and managers are able to work together for a sustained period of time. When a manager is able to bring a team with them to their new organization, the new organization performs better because the manager has people that he or she knows have the knowledge, skills, and abilities necessary to work with the manager.

As mentioned previously, trust is an important component in the development of social capital (Leana & VanBuren, 1999). As basketball players work with their head coach, over time they may develop trust with their head coach which may lead to

development of social capital and improved performance of the team. For example, Dirks (2000) studied NCAA men's basketball teams and found that trust in the head coach mediated the relationship between past performance and future performance of the team. This finding demonstrates that trust in the head coach may facilitate greater team performance. Therefore, as basketball players work with their head coach for a sustained period of time they may develop trust in the coach, which facilitates the development of social capital and possibly greater team performance.

It is important for head coaches' to not only have time to recruit players with higher levels of knowledge, skills, and abilities, but also time to work with the players. In the discussion section of their study of NCAA men's basketball teams, Wright et al. (1995) stated most coaches are offered five-year contracts when hired, because it is believed that it will take four to five years for a coach to fully implement his system and it will take that long for a coach to have a full team of players that he recruited. By the time a coach has been with a team for four or five years, he will have a number of players on his teams that are juniors or seniors. These juniors and seniors on the team will have been with the coach long enough to understand his system and will have learned how to work with the coach. Also, by the time players are juniors or seniors the coach will have a better idea of the players' abilities and how they can be used effectively within his system.

In organizations, typically managers have the most knowledge of the organization and the work that needs to be done. One responsibility of managers may be to help develop the knowledge of other employees in the organization By developing the knowledge of employees, over time, managers are allowing employees to gain tacit and

often firm specific knowledge (Hitt et al., 2001). Similarly, on a basketball team the head coach has knowledge about the game and how players fit into his or her system. The coach will then through practices and film evaluation pass along his or her knowledge to the players on the team. Over time players will learn more about the game from the coach and how to effectively function in the system that the coach has implemented.

Therefore, when players and their head coach work together for a sustained period of time the coach is able to develop players and show the players how to work together effectively. When players and their head coach are able to work together for a sustained period of time, the players are able to better understand what is required of them and the head coach is able to learn about the different knowledge, skills, and abilities that players have and how to use that human capital to successfully execute the team's strategy. Thus, the overlapping tenure of players with their head coach would be expected to have a positive influence on firm performance.

Hypothesis 5: The overlapping tenure of players with their head coach will be positively related to performance.

3.4 Human Capital and Overlapping Tenure

As hypothesized earlier, players with higher levels of human capital may contribute to higher performance. It was also hypothesized that player overlapping tenure is positively related to performance. Based on the evidence presented in support of these hypotheses, performance may be enhanced when players with higher levels of human capital also have overlapping tenure with each other. As stated earlier, when

players have the opportunity to work together for a sustained period of time they may share knowledge about the game of basketball with each other and develop knowledge that is specific to their team. Also, players with higher levels of human capital in playing basketball may have greater knowledge of the game. Therefore, the knowledge that is shared and created by players being together for a sustained period of time may strengthen the positive influence that human capital has on team performance. It then becomes important to not only select and develop players with higher levels of human capital, but also to retain players with higher levels of human capital.

Hypothesis 6: Player overlapping tenure will moderate the relationship between players' human capital and performance such the relationship between players' human capital and performance will be stronger when there is a higher level of player overlapping tenure and weaker when there are lower levels of player overlapping tenure.

3.5 Human Resource Behaviors

In this section, relationships among human capital, social capital, human resource behaviors, and performance will be examined. Two perspectives in strategic human resource management consider human resource behaviors: the behavioral perspective and the systems perspective. The behavioral perspective will be presented first followed by the systems perspective. Then hypotheses will be developed concerning relationships among players' human capital, player overlapping tenure, human resource behaviors, and performance.

One of the earlier theoretical models in strategic human resource management is the behavioral perspective (Jackson, Schuler, & Rivera, 1989; Schuler & Jackson, 1987). The behavioral perspective proposes that human resource behaviors mediate the relationship between human resource practices and organization performance (Schuler & Jackson, 1987). In this situation, the human resource practices are used to encourage and/or control human resource attitudes and behaviors. Wright and McMahan (1992) stated, "in the context of strategic human resource management, differences in the role behaviors required by an organization's strategy require different human resource management practices to elicit and reinforce those behaviors" (p. 303). Schuler and Jackson (1987) described the behavioral perspective and proposed that different strategies require different human resource practices and that human resource practices can influence the behaviors of human resources which can influence organization performance.

Few studies have empirically tested the relationships specified by the behavioral perspective (McMahan et al., 1999; Wright & McMahan, 1992). Johnson (1996) found employees' reports regarding the training and rewards they received were related to satisfaction with service as reported by customers. Also, human resource practices have been shown to be related to a behaviorally based measure of employee motivation (Wright, McCormick, Sherman, & McMahan, 1999). In a more complete test of the behavioral perspective, Sun, Ayree, & Law (2007) found organizational citizenship behaviors partially mediated the relationship between high performance human resource practices and organization performance. Also, Takeuchi et al. (2007) found that human

capital mediated the relationship between high performance work systems and organization performance. It was also found that social exchange mediated the relationship between high performance work systems and organization performance (Takeuchi et al., 2007).

While the behavioral perspective shows that that human resource practices can influence human resource behaviors and these behaviors can influence organization performance, it does not take into consideration the knowledge, skills, and abilities of human resources, instead it only focuses on role behaviors (Wright & McMahan, 1992). The rationale for the behavioral perspective "is based on what is needed from employees apart from the specific technical skills, knowledge, and abilities required to perform a specific task" (Jackson, 1987: 208). Different from the behavior perspective, the systems perspective of strategic human resource management does consider the human capital of the workforce and its influence on human resource behaviors. The systems perspective proposes that human resource capital is an input, in a throughput, output system. Human capital inherent in human resources is the input and the human resources (i.e., people) engage in appropriate role behaviors (throughput) that result in performance outcomes (output) (Wright & Snell, 1991). Wright and McMahan (1992) indicated that human resource behaviors may mediate the relationship between human resource capital and performance. Similarly, Delery and Shaw (2001) proposed that workforce characteristics (i.e., KSAs, motivation, and empowerment) influence workforce productivity, and workforce productivity then influences organizational performance. Thus, the behaviors of the workforce may act as a mediator between characteristics of the workforce and firm

performance. Human resource behaviors have been under studied in strategic human resource management research and the current study helps to fill this gap by empirically testing relationships among human capital, social capital, coordination behaviors, and performance. In the following sections hypotheses are developed concerning relationships among human capital, social capital, behaviors, and performance.

3.5.1 Human Capital and Coordination

While it is important for organizations to have human resources with higher levels of human capital, it also important for these human resources to exhibit the necessary behaviors for the organization to be successful (Delery & Shaw, 2001; Wright et al., 1994; Wright & Snell, 1991). Therefore, firms must select employees that have the human capital necessary to exhibit the required behaviors (Wright et al., 1994). That is, coordination behaviors are needed to integrate and align the actions, knowledge, and objectives of the interdependent members to achieve common goals (e.g., Brannick, Price, Prince, & Salas, 1995; Rico, Sanchez-Manzanares, Gil, & Gibson, 2008).

The human capital inherent in human resources may allow for greater coordination of their activities (Stevens and Campion, 1994). For, example it has been shown that teams with members with higher general cognitive ability developed better coordination (Edwards, Day, Arthur, & Bell, 2006). Similarly, individuals who have received coordination training have demonstrated better coordination within teams (DeChurch & Marks, 2006). Thus, individuals need to know how to coordinate activities in teams to facilitate the functioning of the team (Hackman, 1987).

According to Wright et al. (1994), the potential of human resource capital is realized only to the extent that the possessors of the human capital choose to allow the organization to benefit from the human capital through their behavior. The amount of coordination needed depends on the task interdependence among team members (Saavedra, Earley, & Van Dyne, 1993). With basketball, task completion requires the members of the team to work in a highly interdependent manner as the optimal performance of the team is dependent upon each member on the team. Therefore, individuals with higher levels of human capital in playing basketball would understand the need for coordination among the players on the team. If a basketball team has players with higher levels of basketball human capital then the team should have greater coordination among its members.

Hypothesis 7: Players' human capital will be positively related to coordination.

3.5.2 Social Capital and Coordination

The social capital variable of overlapping tenure may influence the coordination among individuals. When individuals are able to work together for a sustained period of time they are able to develop social relationships, socialization processes, and mutual learning (Levesque, Wilson, & Wholey, 2001; Mathieu, Heffner, Goodwin, Salas, & Cannon-Bowers, 2000). As mentioned previously, when individuals work together for a sustained period of time, the social capital that is accumulated leads to improved coordination of activities, decision making, and implementation of decisions (Hitt, Lee, & Yucel, 2002). When individuals are able to work with other experienced individuals

they are able to gain knowledge about their tasks (Dobbs, 2000). This knowledge about their tasks may allow individuals to anticipate actions that need to be taken in order for them to execute their tasks effectively (Kacmar, Andrews, Van Rooy, Steilberg, and Cerrone, 2006). Thus, when individuals are familiar with one another, they are able to communicate and coordinate their work with each other (Espinosa, Slaughter, Kraut, & Herbsled, 2007).

When individuals work together over time, they become familiar with the task and with each other (Katz, 1982). Therefore, when individuals have worked together for a sustained period of time they may be able to coordinate their activities better because they have developed expectations about each other, can communicate effectively, and can refer to the same terminology (Cramton, 2001). Also, when individuals work together they are better at understanding how their individual work contributes to each other's tasks, which can also help with coordination (Faraj & Sproull, 2000). Harrison et al. (2003) concluded that team members' familiarity with each other provides a basis for coordination.

In this study the focus is on the stability of relationships dimension of social capital (Leana & Van Buren, 1999). The stability of relationships among employees is examined through player overlapping tenure, which is the amount of time players have worked together. When individuals are able to work together over a sustained period of time it may reinforce associability and trust (Leana & Van Buren, 1999). Therefore, when individuals develop social capital they exhibit higher levels of coordination (Hitt et

al., 2002). Based on the evidence presented above, basketball players who have worked together for a sustained period of time may exhibit greater coordination.

Hypothesis 8: Player overlapping tenure will be positively related to coordination.

3.5.3 Coordination as a Mediator

Coordination among individuals working together has been recognized as important to team performance (Brannick, Roach, & Salas, 1993; Daily, 1980; Leedom & Simon, 1995). Empirical work has shown that coordination is positively related to team performance (Rico et al., 2008; Stewart, 2006; Stewart & Barrick, 2000; Wageman, 1995). Therefore, it is also possible that coordination acts as a mediator between players' human capital and performance and between player overlapping tenure and performance. Research typically treats processes such as coordination as a mediator, or throughput by which inputs are transformed into outcomes (Cohen & Bailey, 1997; Weingart, 1997). For example, Rico et al. (2008) proposed coordination as a mediator between shared mental models and performance.

The influence of human resource capital on performance has been proposed as an input, throughput, output system where, human resources (knowledge, skills, and abilities or human capital) are inputs, the human resources (i.e., people) engage in appropriate role behaviors (throughput) that result in performance outcomes (output) (Wright & Snell, 1991). Wright and McMahan (1992) indicated that human resource behaviors may mediate the relationship between human resource capital and performance. Similarly,

Delery and Shaw (2001) proposed that workforce characteristics (i.e., KSAs, motivation, and empowerment) influence workforce productivity, and workforce productivity then influences organization performance. Thus, the behaviors of the workforce may act as a mediator between characteristics of the work force and performance. In this current study, two work force characteristics are examined: human capital and social capital and the influence of human capital and social capital on performance may work through the coordination of the workforce.

This current study specifically examines human capital, overlapping tenure, coordination, and performance in NCAA men's basketball teams. As mentioned previously, coordination is a part of the team work knowledge, skills, and abilities developed by Stevens and Campion (1994). Thus, when basketball players have higher levels of human capital they will be able to coordinate their activities better and through this increased coordination basketball teams should perform at higher levels. Similarly when basketball players are able to work together for a sustained period time, thus having a higher level of overlapping tenure, players will be able to coordinate their activities better. As mentioned previously, social capital can lead to coordination of activities, decision making, and implementation of decisions which may influence performance (Hitt et al., 2002). Thus, through the increased coordination brought about from greater levels of overlapping tenure among players, basketball teams should perform at higher levels.

Hypothesis 9: Coordination will mediate the relationship between players' human capital and performance.

Hypothesis 10: Coordination will mediate the relationship between player overlapping tenure and performance.

Figure two depicts the hypotheses that will be tested in this study. The next section includes a description of the sample, measures, and analyses to be used in this study.

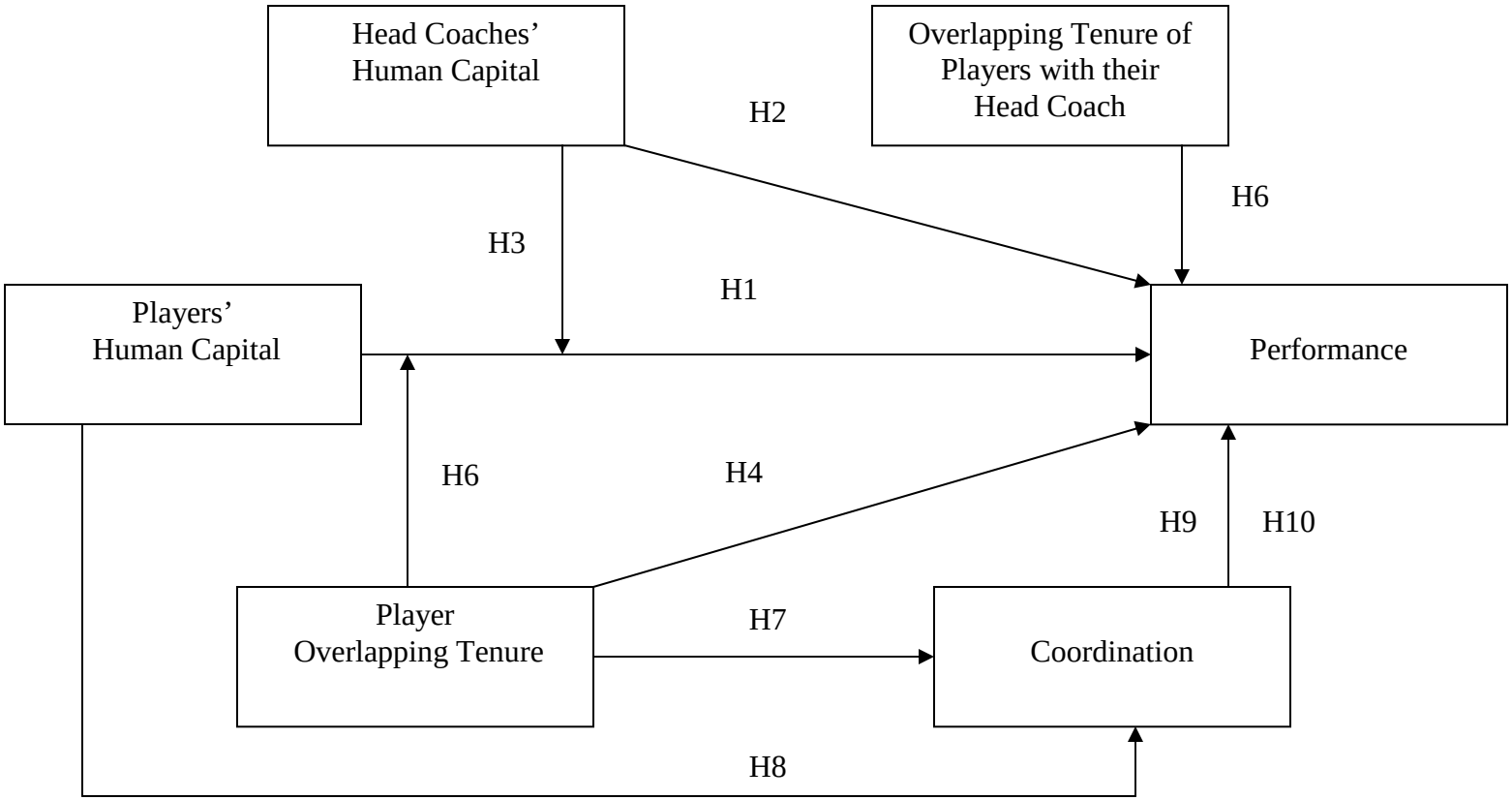

Figure 2: Model of Hypotheses

CHAPTER 4

METHODOLOGY

4.1 Sample

The design of this study required a sample of organizations from the same industry that operate under the same rules and regulations and have shared metrics of human capital, behaviors, and performance. For these reasons National Collegiate Athletic Association (NCAA) Division One men's basketball provided a useful sample for this study. NCAA men's basketball teams have been used as a sample in previous studies in management (e.g., Clement & McCormick, 1989; Dirks, 2000; Wright et al., 1995). NCAA men's basketball is a desirable sample for this study because, first, the success of an NCAA men's basketball team depends almost entirely upon the players and coaches. Second, the game of basketball requires interdependence. The five players that are in the game at any given time must work together in a coordinated fashion if the team is to function effectively. A variety of tasks on the basketball court such as passing the ball, setting screens, defensive switches, and others all require interdependence of the team members. Also, in preparation for games all players on the team practice together in order to prepare to play the next game. By choosing a sample of organizations (teams) from the same industry, it allows for many controls to be naturally built into the study. For example, NCAA men's basketball teams operate under the same set of rules and

regulations. The NCAA sets rules on the number of scholarships each team has, it also sets recruiting regulations, and the NCAA sets limits on the amount of time each team can practice. Also, each basketball team should have the same goal of winning as many games as possible. Using NCAA basketball as sample provides the opportunity to use the same measures of human capital, tenure, human resource behaviors, and performance for each team.

All data collected for this study were archival. Data collected for this study were used to analyze performance for the 2006-2007 and 2007-2008 seasons. Complete data for 314 of the 336 basketball teams that competed in the 2006-2007 season were available and complete data for 319 of the 341 teams that competed in the 2007-2008 season were available. These two seasons were chosen because they are the first two seasons that complete data for a critical variable (players' human capital) of interest in this study are available from an NCAA Division One men's basketball database.

4.2 Measures

4.2.1 Independent Variables

4.2.1.1 Players' Human Capital

A measure of players' human capital was obtained from Rivals NCAA men's basketball recruiting database. Rivals is a college sports recruiting service that provides recruiting ratings of basketball players, the college or university each player signed a letter of intent with, and the year each player signed a letter of intent. Rivals employs a

team of recruiting analysts with both regional and national expertise that are located throughout the country. The player ratings are complied based on film evaluation, personal observations, and input from professional, college, and high school coaches (Rivals, 2008). Rivals is cited consistently in discussions of recruiting classes of colleges and universities especially in the sports of NCAA football and NCAA men's basketball. Rivals syndicates its content to major media outlets such as Yahoo, Sports Illustrated, USA Today, and Sirius Satellite Radio (Rivals, 2008).

Rivals basketball player recruiting ratings are available beginning with the 2002 recruiting class. With recruiting ratings only going back to the 2002 recruiting class, the current study could only analyze performance based on the 2006-2007 and 2007-2008 seasons. The reasoning for this is that in order to have recruiting ratings for players including fifth year seniors, the recruiting classes of 2002, 2003, 2004, 2005, and 2006 were needed for analyses concerning performance in the 2006-2007 season. For analyses of performance in the 2007-2008 season, the recruiting classes of 2003, 2004, 2005, 2006, and 2007 were needed.

Rivals rates players from zero to five with five being the highest rating a player could receive. Ratings are based on evaluations of players playing basketball. Rivals player ranking system is as follows: A player who receives a five rating is considered one of the nation's top 30 players. A player who receives a four rating is considered to be among the top 300 players in the nation. A rating of three means the player is in the top 750 players in the country. A rating of two means the player is a mid-major conference prospect. A rating of one means the player rated very low. A zero rating

means the player is not rated. Thus, Rivals provides a task specific measure of basketball human capital. Based on each team's roster for the 2006-2007 and 2007-2008 seasons, ratings for each player listed on the roster were collected. Players on rosters that are not listed in the Rivals ratings were given a zero rating. As playing basketball is an interdependent task, the average of the ratings of the players on each team were calculated to arrive at an average rating for each team (Steiner, 1972).

4.2.1.2 Head Coaches' Human Capital

Two measures were be used to assess head coaches' human capital. First, similar to Dirks (2000) a measure of experience was collected. In this study the number of games a head coach has coached in a head coaching position at the collegiate level through the 2005-2006 season was collected for analyses of team performance during the 2006-2007 season. The number of games a head coach has coached at the collegiate level through the 2006-2007 season was collected for analyses of team performance for the 2007-2008 season. Second, the winning percentage for each head coach while in a head coaching position at the collegiate level through the 2005-2006 season was collected for the 2006-2007 season analyses. Also, for analyses concerning the 2007-2008 season, the winning percentage for each head coach while in a head coaching position at the collegiate level through the 2006-2007 season was collected. The wining percentage for each head coach was calculated by dividing the number of games won by the total number of games coached. Pfeffer and Davis-Blake (1986) also used head coach's experience and past winning record as measures of head coach's abilities in their study of

NBA teams. The number of games each head coach has coached at the collegiate level and each head coach's winning percentage were collected from each head coach's biography. Each head coach's biography is available on the athletics website of each college or university that has an NCAA Division One men's basketball program. The biography of each head coach includes the coach's career statistics including the number of games coached as a head coach and the winning percentage as a head coach.

4.2.1.3 Players Overlapping Tenure

In order to calculate players overlapping tenure for the 2006-2007 and 2007-2008 seasons, each NCAA Division One men's basketball team's roster for both the 2006-2007 and 2007-2008 seasons were collected. The rosters for each basketball team were collected from the NCAA Division One men's basketball database maintained by ESPN. This database includes rosters and statistics for each NCAA Division One men's basketball team. Based on the rosters, the number of seasons each player has been with each team was determined. In some cases players will have been redshirted. The term redshirt describes a student-athlete who does not participate in competition in a sport for an entire academic year. When a student-athlete redshirts he or she may practice with the team, but cannot compete against outside competition. Thus, the student-athlete would not use a year of eligibility. For those players in this situation a season was added on to the amount of time a player has been with a team. For example, a junior who redshirted a season was considered as being with the team for four seasons instead of three seasons for a junior who did not redshirt. Junior college transfers were also an issue. When

junior college players transfer to Division One colleges or universities they may join the men's basketball team at the Division One college or university level already having used two seasons of eligibility based on NCAA rules. For example, a junior college player may be listed as a junior on a roster, but it may be the player's first season with the team. In this situation, the player was considered to be with the current team for one year.

To calculate player overlapping tenure the tenure of each player was compared to the tenure of every other player on the team. After determining each player's overlapping tenure with every other player on the team, an average of individual players' overlapping tenure was taken to arrive at an average of players overlapping tenure for each team. Most studies that have examined team tenure have simply taken the tenure of each individual on a team and averaged them to arrive at a measure of team tenure (e.g., Boeker, 1997; Johnson, Hoskisson, & Hitt, 1993; Sutcliffe, 1994; Wiersema & Bantel, 1992). To measure team tenure, Boeker (1997) obtained the organizational tenure for each member of the top management team of 67 semiconductor producers. Team tenure was measured by taking the average of the aggregate of all top management team members. Measuring top management team tenure, Finkelstein and Hambrick (1990) took the organizational tenure of each top management team member and averaged them together to arrive at a team tenure measure. By using individual's organizational tenure it appears that organizational tenure instead of team tenure was being measured.

Two examples will demonstrate the difference between team tenure and overlapping tenure. For example, a team with three members with tenure in the team of two years, two years, and five years respectively, the team tenure would be the average of

two, two, and five which is three. With overlapping tenure, team member one has worked with team members two and three for two years each and team member two has worked with team member three for two years. Averaging these arrives at an average overlapping tenure of two years.

The example provided above shows that the average overlapping tenure for this team would be two years, while the average team tenure would be three years. The overlapping tenure measure of two years provides a more accurate account of the amount time people have actually worked together instead of the team tenure measure of three years which only provides for the amount of time people have been in the team.

A second example will demonstrate a bias that may result when simply averaging individuals tenure instead of calculating overlapping tenure. A team with three members with tenure in the team of ten years, one year, and one year respectively, the team tenure would be the average of ten, one, and one which is four. With overlapping tenure, team member one has worked with team members two and three for one year each and team member two has worked with team member three for one year. Averaging these arrives at an average overlapping tenure of one year. This example shows that averaging the amount of time individuals have been in the team results in a bias showing that individuals have worked together longer than they actually have. In this example the average tenure is four years, while the overlapping tenure is one year. Thus, overlapping tenure provides a more accurate account of the amount of time individuals have actually worked together.

4.2.1.4 Players Overlapping Tenure with their Head Coach

Players' tenure with their current team was collected from the rosters of each team for the 2006-2007 and 2007-2008 seasons. Head coach's tenure is the number of seasons a head coach has been the head coach with the current team through the 2006-2007 season and also the 2007-2008 season. Each head coach's tenure with their current team was obtained from each head coach's biography. To calculate the overlapping tenure of players with their head coach, the tenure of each player was compared with the tenure of the head coach. Then, an average of the tenures of each player on a team with the head coach was calculated to arrive at an average overlapping tenure of players with the head coach for each team. The overlapping tenure of players with their head coach was calculated the same way as the overlapping tenure of players (described above).

4.2.1.5 Players' Coordination

To measure coordination, the assist to turnover ratio for each team for the 2006-2007 and 2007-2008 seasons was utilized. The assist to turnover ratio was used as a measure of coordination because, first, when playing basketball coordination is needed when an assist occurs. An assist takes place when one player passes the ball to another player and by virtue of the pass the player was able to make a basket without dribbling the basketball. Coordination is needed among team members to enable them to pass the ball to each other and score baskets. Second, coordination is needed to reduce turnovers. When players coordinate their actions, players may be more likely to know where teammates are going to be on the court which may reduce the likelihood of throwing an

errant pass that results in a turnover. Third, the assist to turnover ratio provides a team level measure of coordination as each player on the team could make or contribute to an assist or turnover. Thus, greater coordination is achieved when teams have higher assist to turnover ratios.

The assist to turnover ratio for each team was collected from each team's season ending statistics that are available from the NCAA Division One men's basketball database maintained by ESPN. The assist to turnover ratio was analyzed in the following manner. A team may have an assist to turnover ratio of 1.3 to 1; in this situation 1.3 would be used for the assist to turnover ratio as 1.3 assists are taking place to every one turnover. Another team may have an assist to turnover ratio of 1 to 1.3, in this case .77 would used for the assist to turnover ratio as there is .77 assist taking place for every one turnover. Thus, an assist to turnover ratio of 1.3 to 1 demonstrates greater coordination than an assist to turnover ratio of 1 to 1.3.

4.2.2 Dependent Variables

4.2.2.1 Performance

Similar to other studies (e.g., Delery & Doty, 1996; Huselid, 1995; Wright et al., 1995) two measures of performance were used in this study. Performance was measured using Jeff Sagarin's season-ending rankings of each NCAA Division One men's basketball team for the 2006-2007 and 2007-2008 seasons. Sagarin's rankings provide a performance measure for each team. Sagarin's rankings were also used as a performance

measure by Wright et al., (1995). Sagarin's rankings control for the quality of competition by taking into consideration the teams that a team played and the opponents that the opponents of a team played. The rankings also apply a diminishing returns principle to prevent high rankings derived from large margins of victory over weak opponents. Thus, the rankings reward teams that do well against good teams. It is important to note that the team ranked number one in Sagarin's rankings is the top performing team.

Performance was also be assessed by teams' winning percentage. The wining percentages for each team in the 2006-2007 season and 2007-2008 season were obtained from ESPN's NCAA Division One men's basketball database. The database includes the win/loss record for each NCAA Division One men's basketball team. The winning percentage was calculated by dividing the number of games a team has won by the total number of games played.

4.2.3 Control Variables

4.2.3.1 Team Size

Following Barrick, Bradley, Kristof-Brown, and Colbert (2007) team size was included as a control variable because it has been shown to be related to organizational performance (e.g. Carpenter, Geletkanycz, & Sanders, 2004; Michel & Hambrick, 1992). Team size was measured as the number of players on each basketball team.

4.3 Aggregation

The independent variables (players' human capital, player overlapping tenure, and players overlapping tenure with their head coach) in this study were aggregated from the individual level to the team level. It has been suggested that the nature of a team's task should be considered in order to properly account for the influence that certain individual traits have on performance (Steiner, 1972). For additive tasks, such that each team member contributes to performance in proportion to his her ability, the mean of the variable being examined can be taken. For disjunctive tasks, where a team can perform as well as its best member, a maximum score of the individual member scores can be used as the team measure. When the task is conjunctive, that is when the performance of a team depends on the team's weakest member, a minimum score of the individual member scores can be used as the team/firm measure (Steiner, 1972). Other studies (e.g., LePine et al., 1997; Neuman & Wright, 1999) have followed Steiner's (1972) typology for aggregating from the individual level to the team level. Also, Berman et al. (2002) in their study of NBA teams aggregated individual level measures of shared team experience to the team level by taking an average of the individual level measures, thus NBA teams perform an additive task. Similarly, NCAA men's basketball teams perform an additive task. As mentioned previously tasks on the basketball court such as passing the ball, setting screens, defensive switches, and others require the interdependence of basketball team members. Therefore, the independent variables (players' human capital, player overlapping tenure, and players overlapping tenure with their head coach) in this study were aggregated to the firm level by taking the mean of individual level measures.

4.4 Analyses

Regression will be used to test each hypothesis for both the 2006-2007 season and the 2007-2008 season. For interpretation of any statistically significant interactions, the interactions will be graphed according to the procedures outlined by Aiken and West (1991). The mediation hypotheses will be tested according to the procedures outlined by Barron and Kenny (1986). To test for mediation, Baron and Kenny (1986) stated four conditions need to be satisfied. First, the independent variable should be related to the dependent variable. Second, the independent variable should be related to the mediator. Third, the mediator should be related to the dependent variable. Finally, the fourth condition stipulates that when the effect of the mediator is accounted for, the direct relationship between the independent and dependent variables should become non-significant (full mediation) or substantially smaller (partial mediation).

4.5 Results

Table 1 shows the means, standard deviations, and correlations for data from the 2006-2007 seasons and Table 2 shows the means, standard deviations, and correlations from the 2007-2008 season. Additionally, Table 3 displays correlations between the variables that were measured in the 2006-2007 season and 2007-2008 season. The correlation between team size measured in the 2006-2007 season and 2007-2008 season was not significant. Additionally, player overlapping tenure measured in the 2006-2007 season and 2007-2008 season was not significant. As shown in Table 3, the remaining

variables were significantly correlated with measurement in the 2006-2007 season and 2007-2008 seasons.

Tables 4, 5, 6, and 7 display the results for hypotheses 1, 2, 3, 4, 5, and 6. The basic analytic strategy was to create the first model using team size (Model 1) as a control, and then build the other models by adding the relevant variables. The human capital variables were then entered in Model 2, followed by the social capital variables in Model 3, and the interactions were entered in Model 4.

Hypotheses 1 and 2 were tested in Model 2 of Tables 4, 5, 6, and 7, when the three human capital variables (players' ratings, head coach number of games, and head coach winning percentage) were entered. Hypothesis 1 predicted that players' human capital would positively predict performance. Model 2 in Tables 4, 5, 6, and 7 show that hypothesis 1 was supported in both seasons and with both performance measures. For the 2006-2007 season players' human capital significantly predicted performance measured in terms of Sagarin rankings (beta = -0.61, $p < .01$) and team winning percentage (beta = 0.37, $p < .01$). Players' human capital also significantly predicted performance in the 2007-2008 season measured in terms of Sagarin Rankings (beta = -0.59, $p < .01$) and team winning percentage (beta = 0.29, $p < .01$). The results indicate that NCAA basketball teams that have players with higher levels of human capital perform at a higher level.

Hypothesis 2 predicted that head coaches' human capital would positively predict performance. Model 2 in Tables 4, 5, 6, and 7 display the results for hypothesis 2. For the 2006-2007 season head coaches' human capital in terms of winning percentage as a

head coach significantly predicted performance measured in terms of Sagarin rankings (beta = -0.23, $p < .01$) and team winning percentage (0.27, $p < .01$). Head coaches' human capital in terms of winning percentage as a head coach significantly predicted performance in the 2007-2008 season measured in terms of Sagarin rankings (beta = -0.21, $p < .01$) and team winning percentage (0.22, $p < .01$). For the 2006-2007 season head coaches' human capital in terms of number of games as a head coach did not significantly predict performance measured in terms of Sagarin rankings (beta = -0.03, $p > .05$) or team winning percentage (-0.02, $p > .05$). Head coaches' human capital in terms of number of games as a head coach was not significantly related performance in the 2007-2008 season measured in terms of Sagarin rankings (beta = 0.01, $p > .05$) or team winning percentage (-0.10, $p > .05$). Thus, hypothesis 2 was supported for one of the two measures of head coaches' human capital. The results indicate that NCAA men's basketball teams that have a head coach with higher levels of human capital perform at a higher level.

Hypothesis 3 predicted the interaction between players' human capital and head coaches' human capital would strengthen the relationship between players' human capital and performance. To test hypothesis 3, size was first controlled for (Model 1), then players' human capital and head coaches' human capital variables were entered in the second step (Model 2), followed by the social capital variables in the third step (Model 3) and interactions between players' human capital and head coaches' human capital were entered in the fourth step (Model 4). The results for hypothesis 3 are shown in Tables 4, 5, 6, and 7. Model 4 in Table 4 explained no incremental variance in predicting

performance measured in terms of Saragin rankings for the 2006-2007 season. Hypothesis 3 was tested with team winning percentage for 2006-2007 season as the performance variable. Model 4 of Table 5 explained no incremental variance in performance measured in terms of team winning percentage. Thus, the interaction between players' human capital and head coaches' human capital in terms of number games as a head coach and the interaction between players' human capital and head coaches' human capital in terms of winning percentage as a head coach did not significantly predict performance in the 2006-2007 season.

Hypothesis 3 was also tested for the 2007-2008 season. Model 4 in Table 6 explained no incremental variance in predicting performance measured in terms of Saragin rankings for the 2007-2008 season. Hypothesis 3 was tested with team winning percentage for 2007-2008 season as the performance variable. Model 4 of Table 7 explained no incremental variance in performance measured in terms of team winning percentage. Thus, the interaction between players' human capital and head coaches' human capital in terms of number games as a head coach and the interaction between players' human capital and head coaches' human capital in terms of winning percentage as a head coach did not significantly predict performance in the 2007-2008 season.

To test hypotheses 4 and 5, team size was entered in Model 1, then the human capital variables were entered in Model 2, and the overlapping tenure (social capital) variables were entered in Model 3. Therefore, team size and the human capital of players and head coaches were controlled for when testing hypotheses 4 and 5. As shown in Model 3 of tables 4, 5, 6, and 7 the social capital variables of player overlapping tenure

and players overlapping tenure with their head coach explained a statistically significant amount of incremental variance in performance beyond that of team size and human capital for both seasons. Hypothesis 4 predicted player overlapping tenure would be positively related to performance. The results for hypothesis 4 are displayed in Model 3 of Tables 4, 5, 6, and 7. For the 2006-2007 season player overlapping tenure significantly predicted performance measured in terms of Sagarin rankings (beta = -0.23, $p < .01$) and team winning percentage (beta = 0.25, $p < .01$). Player overlapping tenure also significantly predicted performance in the 2007-2008 season measured in terms of Sagarin Rankings (beta = -0.13, $p < .01$) and team winning percentage (beta = 0.26, $p < .01$).

Hypothesis 5 predicted players overlapping tenure with their head coach would be positively related to performance. The results for hypothesis 5 are displayed in Model 3 of Tables 4, 5, 6, and 7. For the 2006-2007 season players overlapping tenure with their head coach did not significantly predict performance measured in terms of Sagarin rankings (beta = 0.03, $p > .05$) and team winning percentage (beta = 0.08, $p > .05$). Similarly, players overlapping tenure with their head coach did not significantly predict performance in the 2007-2008 season measured in terms of Sagarin Rankings (beta = -0.03, $p > .01$) and team winning percentage (beta = 0.10, $p > .05$).

Hypothesis 6 predicted the interaction between players' human capital and player overlapping tenure would strengthen the relationship between players' human capital and performance. To test hypothesis 6, size was first controlled for (model 1), the human capital variables were then entered in Model 2, followed by the social capital variables in

Model 3, and the interaction terms were entered in Model 4. As displayed in Model 4 of Tables 4 and 5 the interaction terms did not explain any incremental variance measured in terms of Saragin rankings or team wining percentage for the 2006-2007 season. Additionally Model 4 of Tables 6 and 7 show, the interaction terms did not explain any incremental variance measured in terms of Saragin rankings or team wining percentage for the 2006-2007 season or team winning percentage ($\Delta R^2 = .00$, $p > .05$) in the 2007-2008 season.

Hypotheses 7 and 8 predicted that players' human capital would positively predict performance and that player overlapping tenure would positively predict performance respectively. To test these hypotheses, team size was first entered in Model 1, players' human capital was entered in Model 2, and player overlapping tenure was entered in Model 3. The results for hypothesis 7 are displayed in Model 2 of Tables 8 and 9. When controlling for team size, players' human capital significantly predicted coordination (beta = 0.36, $p < .01$) in the 2006 -2007 season (Table 8). Additionally, Table 9 shows that controlling for team size, players' human capital significantly predicted coordination (beta = 0.33, $p < .01$) in the 2007 -2008 season.

Hypothesis 8 predicted player overlapping tenure would be positively related to coordination. Team size and players' human capital were controlled for when testing hypothesis 8. Model 3 of Table 8 shows that player overlapping tenure significantly predicted coordination (beta = 0.19, $p < .01$) in the 2006 -2007 season. Further, Model 3 of Table 9 shows that player overlapping tenure significantly predicted coordination (beta = 0.19, $p < .01$) in the 2007 -2008 season.

Hypothesis 9 predicted coordination would mediate the relationship between players' human capital and performance. Mediation was tested according to Barron and Kenney (1986). Team size was controlled for when testing for mediation. Table 10 displays the test for mediation with performance measured in terms of Sagarin rankings for the 2006-2007 season. Table 10 shows that coordination significantly predicted performance (beta = -0.64, $p < .01$) in the 2006-2007 season in terms of Sagarin rankings. Additionally, Table 10 shows players' human capital significantly predicted performance (beta = -0.70, $p > .01$) and coordination (beta = 0.36, $p > .01$). When performance was regressed on players' human capital and coordination at the same time the beta for players' human capital was reduced to -0.54, but remained significant ($p < .01$). A Sobel test was conducted using Preacher and Hayes's (2004) procedure for simple mediation for each of the mediations. The results provided support for coordination acting as a mediator ($Z_{Sobel} = -6.09$, $p < .01$) between players' human capital and performance measured as Sagarin rankings. Thus, coordination partially mediated the relationship between players' human capital and performance (Sagarin rankings).

Table 11 displays the test for mediation with performance measured in terms of team winning percentage for the 2006-2007 season. Table 11 shows that coordination significantly predicted performance (beta = 0.60, $p < .01$) in the 2006-2007 season in terms of team winning percentage for the 2006-2007 season. Table 11 also shows players' human capital significantly predicted performance (beta = 0.46, $p > .01$) and coordination (beta = 0.60, $p > .01$). When performance was regressed on players' human capital and coordination at the same time the beta for players' human capital was reduced

to 0.28, but remained significant ($p < .01$). A Sobel test was conducted for the mediator. The results provided support for coordination acting as a mediator ($Z_{Sobel} = 5.87$, $p < .01$) between players' human capital and performance measured as team winning percentage. Thus, coordination partially mediated the relationship between players' human capital and performance (team winning percentage).

Hypothesis 9 was also tested for the 2007-2008 season. Table 12 displays the test for mediation with performance measured in terms of Sagarin rankings for the 2007-2008 season. Table 12 shows that coordination significantly predicted performance (beta = -0.61, $p < .01$) in the 2007-2008 season in terms of Sagarin rankings. Table 12 also shows players' human capital significantly predicted performance (beta = -0.67, $p > .01$) and coordination (beta = 0.33, $p > .01$). When performance was regressed on players' human capital and coordination at the same time the beta for players' human capital was reduced to -0.52, but remained significant ($p < .01$). A Sobel test was conducted for the mediator. The results provided support for coordination acting as a mediator ($Z_{Sobel} = -5.60$, $p < .01$) between players' human capital and performance measured as Sagarin rankings. Thus, coordination partially mediated the relationship between players' human capital and performance (Sagarin rankings).

Table 13 displays the test for mediation with performance measured in terms of team winning percentage for the 2007-2008 season. Table 13 shows that coordination significantly predicted performance (beta = 0.61, $p < .01$) in the 2007-2008 season in terms of team winning percentage. Table 13 also shows players' human capital significantly predicted performance (beta = 0.37, $p > .01$) and coordination (beta = 0.33,

$p > .01$). When performance was regressed on players' human capital and coordination at the same time the beta for players' human capital was reduced to 0.18, but remained significant ($p < .01$). A Sobel test was conducted for the mediator. The results provided support for coordination acting as a mediator ($Z_{Sobel} = 5.58$, $p < .01$) between players' human capital and performance measured as team winning percentage. Thus, coordination partially mediated the relationship between players' human capital and performance (team winning percentage).

Hypothesis 10 predicted coordination would mediate the relationship between player overlapping tenure and performance. Mediation was tested according to Barron and Kenney (1986). Team size was controlled for when testing for mediation. Table 14 displays the test for mediation with performance measured in terms of Sagarin rankings for the 2006-2007 season. Table 14 shows player overlapping tenure significantly predicted performance (beta = -0.28, $p > .01$) and coordination (beta = 0.22, $p > .01$). When performance was regressed on player overlapping tenure and coordination at the same time the beta for player overlapping tenure was reduced to -0.14, but remained significant ($p < .01$). A Sobel test was conducted for the mediator. The results provided support for coordination acting as a mediator ($Z_{Sobel} = -3.97$, $p < .01$) between player overlapping tenure and performance measured as Sagarin rankings. Thus, coordination partially mediated the relationship between player overlapping tenure and performance (Sagarin rankings).

Table 15 displays the test for mediation with performance measured in terms of team winning percentage for the 2006-2007 season. Table 15 shows player overlapping

tenure significantly predicted performance (beta = 0.33, p > .01) and coordination (beta = 0.22, p > .01). When performance was regressed on player overlapping tenure and coordination at the same time the beta for player overlapping tenure was reduced to 0.21, but remained significant (p < .01). A Sobel test was conducted for the mediator. The results provided support for coordination acting as a mediator (Z_{Sobel} = 3.93, p < .01) between player overlapping tenure and performance measured as team winning percentage. Thus, coordination partially mediated the relationship between player overlapping tenure and performance (team winning percentage).

Hypothesis 10 was also tested for the 2007-2008 season. Table 16 displays the test for mediation with performance measured in terms of Sagarin rankings for the 2007-2008 season. Table 16 shows player overlapping tenure significantly predicted performance (beta = -0.18, p > .01) and coordination (beta = 0.20, p > .01). When performance was regressed on player overlapping tenure and coordination at the same time the beta for player overlapping tenure was reduced to -0.05 and became non-significant (p > .05). Thus, coordination fully mediated the relationship between player overlapping tenure and performance measured as Sagarin rankings for the 2007-2008 season. A Sobel test was conducted for the mediator. The results provided support for coordination acting as a mediator (Z_{Sobel} = -3.49, p < .01) between player overlapping tenure and performance measured as Sagarin rankings. Thus, coordination fully mediated the relationship between player overlapping tenure and performance (Sagarin rankings).

Table 17 displays the test for mediation with performance measured in terms of Sagarin rankings for the 2006-2007 season. Table 17 shows player overlapping tenure significantly predicted performance (beta = 0.23, $p > .01$) and coordination (beta = 0.20, $p > .01$). When performance was regressed on player overlapping tenure and coordination at the same time the beta for player overlapping tenure was reduced to 0.11, but remained significant ($p < .05$). A Sobel test was conducted for the mediator. The results provide support for coordination acting as a mediator ($Z_{Sobel} = 3.49$, $p < .01$) between player overlapping tenure and performance measured as team winning percentage. Thus, coordination partially mediated the relationship between player overlapping tenure and performance (team winning percentage).

CHAPTER 5

DISCUSSION

5.1 Discussion of Results

This study contributes to the field of strategic human resource management by placing a focus on human resource capital and examining relationships among human capital, social capital, human resource behaviors, and performance. Most of the empirical studies in strategic human resource management have examined the relationship between human resource practices and organization performance (e.g. Arthur, 1994; Combs et al., 2006; Delery & Doty, 1996; Huselid, 1995; Ichinowski, Shaw, & Prennushi, 1997; MacDuffie, 1995; Wright et al., 2005), while relatively few studies have examined the relationship between human resource capital and organization performance (e.g., Carmeli & Schaubroeck, 2005; Lopez-Cabrales et al., 2006; Takeuchi et al., 2007; Wright et al., 1995), and even fewer have taken into consideration human resource behaviors (e.g., Sun et al., 2007). This study examined the human capital of basketball players and head coaches and its relationship with performance. Additionally, this study introduced the social capital variable of overlapping tenure and tested its relationship with performance. The interaction between human capital and social capital and its relationship with performance was also examined in this study. To address the under studied area of human resource behaviors in strategic human resource

management, this study followed models (e.g., Delery & Shaw, 2001; Wright & McMahan, 1992) that proposed workforce behaviors would mediate the relationship between characteristics of the workforce and organization performance. Specifically, this study examined the relationships that human capital and social capital have with the human resource behavior of coordination. With the interdependent nature of basketball, it is important for players to coordinate their activities on the court to perform at a high level. Therefore, the mediation role that coordination may play between human capital and performance and between social capital and performance was tested.

This study first examined the relationship between players' human capital and performance. Using an objective, industry accepted, third party measure of players' human capital, it was found that over a two year period with two different performance measures, players' human capital positively predicted performance. While previous studies have also found a positive relationship between human capital and performance, the measures of human capital used tended to be general (e.g. Takeuchi, et al., 2007) and were assessed by one individual for an entire organization (e.g., Carmeli & Schaubroeck; Lopez-Cabrales et al., 2006). Different from previous studies, this study employed a measure of human capital for each player that was provided by an industry accepted third party. The findings of a positive relationship between players' human capital and performance over a two year period of time is important because the measure of players' human capital is reasonably objective, made by outsiders, and made long before the team's season began. This highlights the importance of having effective recruitment, selection, and retention processes to attract and retain the most talented individuals.

In addition, the human capital of the leader, in this case the head coach was also related to team performance over a two year period of time. While the human capital of the head coach in this situation was important to the performance of the team it was not as important as the human capital of the players was to the team's performance. Thus, in this situation, while strategizing, organizing, and decision making may be important roles of the head coach, it seems that much of what makes an effective head coach is his ability to attract and retain the best talent. The findings of players' human capital and head coaches' human capital being positively related to performance demonstrate the importance of human capital to organizations. With intense global competition for high quality human resource capital (Gardner, 2005), greater importance is placed on having effective human resource practices to attract and retain human capital.

This study also tested the relationship between the interaction of players' human capital and head coaches' human capital and performance. The interaction did not significantly predict performance over the two year period of time for either performance measure. This finding indicates that head coaches' human capital did not moderate the relationship between players' human capital and performance. Thus, head coaches' human capital did not significantly strengthen or weaken the relationship between players' human capital and performance. The findings reported earlier indicated that players' human capital had a stronger relationship with performance than head coaches' human capital. Therefore, the importance of a head coach in this situation may be the ability to attract and retain talent.

This study also introduced the social capital variable of overlapping tenure, which is defined as the amount of time individuals have worked together towards common performance outcomes. Thus, the focus was on the stability of relationships aspect of social capital (Leana & Van Buren, 1999). Leana and Van Buren (1999) suggested that stable relationships lead to social capital, and that social capital results in a number of positive organizational outcomes such as greater performance, decision making, and productivity. While controlling for team size and human capital, across both years and performance measures examined in this study, player overlapping tenure positively influenced performance, thus, over time, the stability of relationships among players has a positive influence on firm performance. The ability of players to work together over time to develop stable relationships may be important to basketball teams. This is because as individuals work together they may be able to learn more about each other, work better together, and perform more effectively (Kacmar, et al., 2006). Overlapping tenure is arguably important to strategic human resource management because when people are able to work together for a sustained period of time they are able to develop social capital which may improve their coordination of activities, decision making, implementation of decisions, and performance (Hitt, Lee, & Yucel, 2002).

The overlapping tenure of players with their head coach was also examined in this study. After controlling for team size and players' and head coaches' human capital, players overlapping tenure with their head coach was not significantly related to either performance measures across the two seasons examined in this study. As stated earlier, the overlapping tenure of players was positively related to performance and the

overlapping tenure of players with their head coach was not related to performance. These findings indicate that, at least in this situation it is more important to team performance for the players on a team to work together for a sustained period of time, than it is for players to work with their head coach for a sustained period of time. This also points to the importance of recruiting and selection for head coaches. Once a head coach has a strategy in place for the team, the coach must then be able to effectively recruit and select basketball players to fill each position on the team and also fit with the strategy. After the head coach has staffed the team properly, it then becomes important to the performance of the team for the players to stay together on the team.

The interaction between players' human capital and players' social capital and its relationship with performance was also examined in this study. The interaction did not significantly predict performance over the two year period of time for either performance measure. It is important to note that while the interaction between players' human capital and player overlapping tenure did not significantly predict performance, players' human capital and player overlapping tenure did have significant direct effects on performance. Therefore, the overlapping tenure of players' did not significantly strengthen or weaken the relationship between players' human capital and performance.

This study also examined human resource behaviors, which have been under studied in strategic human resource management. In addition to proposing that human resource behaviors influence performance, the models proposed by Delery and Shaw (2001) and Wright and McMahan (1992) indicate that characteristics of the workforce may influence behaviors of the workforce. In this study, two characteristics of the

workforce (human capital and social capital) that may influence the behaviors of the workforce were examined. In this study it was found that players' human capital significantly predicted coordination behaviors over a two year period of time. As mentioned previously, the amount of coordination needed depends on the task interdependence among team members (Saavedra, Earley, & Van Dyne, 1993). In this study the highly interdependent task of playing basketball was studied. Thus, basketball players would understand the need to exhibit coordination behaviors with their teammates. The findings of this study indicate that when basketball players have higher levels of task specific (basketball) human capital they exhibit higher levels of coordination. This finding may also be pertinent to organizations that utilize teams. With teams, the members tend to be highly interdependent, thus coordination among team members may be necessary. Therefore, organizations would tend to look for individuals with the human capital necessary to exhibit the required behaviors (Wright et al., 1994). Thus, it becomes important for organizations to develop recruitment and selection practices that encourage the acquisition of individuals with the human capital necessary to exhibit desired behaviors.

Examining the social capital variable of player overlapping tenure, it was found that players' social capital was positively related to coordination behaviors over a two year period of time. As mentioned previously, when individuals develop social capital they may be able to coordinate their activities more effectively (Hitt et al., 2002). Thus, the results of this study indicate that it may be important for organizations to retain individuals so they are able to develop stable relationships which may influence the

behaviors exhibited by the individuals. Based on the finding that social capital is positively related to coordination behaviors, organizations may look to develop human resource practices that encourage the retention of individuals so they are able to develop stable relationships. If individuals are able to develop stable relationships they may be more likely to exhibit coordination behaviors that may be beneficial to the organization.

While not specifically hypothesized, it was found that coordination positively predicted performance across both seasons and performance measures. This finding indicates that when human resources exhibit desired behaviors, performance is greater (Wright et al., 1994). As mentioned previously coordination is recognized as being important to the success of organizations (Brannick, Roach, & Salas, 1993; Leedom & Simon, 1995). Specifically, empirical work has shown that coordination is positively related to team performance (Rico et al., 2008; Stewart, 2006; Stewart & Barrick, 2000). When tasks are interdependent in nature, greater amounts of coordination tend to be needed (Barrick, Bradley, Kristof-Brown, & Colbert, 2007; Van de Ven, Delbecq, & Koenig, 1976). Therefore, in organizations where employees perform interdependent tasks, coordination may be necessary for the organization to be successful. Thus, organizations may develop human resource practices that encourage employees to exhibit the necessary behaviors.

Additionally, this study examined the mediating role human resource behaviors play between characteristics of the workforce and performance. It has been proposed that workforce behaviors mediate the relationship between characteristics of the workforce and performance (Delery & Shaw, 2001, Wright & McMahan, 1992, Wright & Snell,

1991). In this study, the role of coordination mediating the relationship between players' human capital and performance was examined. It was found that over a two year period of time across two performance measures that coordination partially mediated the relationship between players' human capital and performance. Wright et al. (1994) proposed that human capital influences performance only when the possessors of the human capital allow the firm to benefit through their behaviors. The findings of this study provide some support for the proposition asserted by Wright et al. (1994) as this study found that within NCAA men's basketball teams, the influence of human capital on performance works at least partially through the coordination behaviors of the players. Thus, organizations may look to develop human resource practices that not only help the organization acquire high quality human resources, but that also encourage human resources to exhibit the behaviors necessary for the organization to be successful.

The mediating role that coordination plays between social capital and performance was also examined. It was found that in the 2006-2007 season, coordination partially mediated the relationship between social capital and performance across both performance measures. In the 2007-2008 season, it was found that coordination fully mediated the relationship between social capital and performance when Sagarin's rankings were used as the performance measure and coordination partially mediated the relationship between social capital and performance when team winning percentage was used as the performance measure. These findings indicate that the influence of the social capital variable of overlapping tenure on performance works at least partially through the coordination behaviors of employees. Thus, within NCAA men's basketball, when

players are able to work together for a sustained period of time and develop stable relationships, the coordination behaviors that players develop may allow teams to perform at higher levels. Therefore, the ability of organizations to retain individuals and encourage them to exhibit necessary behaviors may allow organizations to perform better. The findings listed above contribute to the under studied area of human resource behaviors in strategic human resource management research by demonstrating that when human resources allow organizations to benefit from their human capital and social capital through their behaviors, organizations may perform at higher levels.

Finally, this study is an improvement over previous studies that have employed NCAA basketball teams as a sample. For example, Dirks (2000) examined trust in leadership among NCAA men's basketball teams with a small sample size of 30 teams. In this current study over 300 teams were examined over a two year period of time. This greater sample size may provide a more accurate account of what makes a basketball team successful. Additionally, this study improves upon previous measures of human capital employed in NCAA men's basketball studies. Wright et al. (1995) had head coaches assess the human capital of their entire team. Dirks (2000) used all-conference teams as a measure of human capital. Since all players do not get selected for all-conference teams, Dirks (2000) did not have a measure of human capital for each player. Also, all-conference teams are selected after the season ends, so human capital is assessed after the season and not before the season begins. Different from Dirks (2000), the current study employed a measure of human capital for each team member and the human capital was assessed before each player joined team. Finally, the current study

employed enhanced performance measures over what was used by Dirks (2000). Dirks, simply used the winning percentage each team had against other teams in its conference. NCAA men's basketball teams typically play a number of teams outside of their conference and these games were not considered by Dirks. In the current study, team winning percentage was assessed by examining all games played by each team. Additionally, Jeff Sagarin's computer rankings, which controls for strength of schedule was used as performance measure.

5.2 Contributions to the Resource Based-View of the Firm

The findings of this study arguably support the resource-based view of the firm. This study empirically supports that when the human capital and social capital inherent in human resources are valuable, rare, inimitable, and non-substitutable, they may well create a sustained competitive advantage for organizations (Barney, 1991; Wright et al., 1994). This study examined task specific human capital. When human resources possess human capital that is specific to the tasks being performed, value may be added to the organization. This is due to different tasks requiring different types and levels of human capital and individuals possess different types and levels of human capital. Therefore, individuals may contribute differently to the same task (Wright et al., 1994). In NCAA basketball there are a variety of positions played on the court, thus, teams look to acquire players with the human capital specific to playing certain positions. If teams are able to successfully acquire players with the proper human capital, it may add value to the team. Human resources that possess specific human capital may also be rare because few

people may possess the necessary type and level of human capital necessary for a task. In NCAA basketball, teams compete to sign the best recruits in the country, thus it may be difficult and costly for teams to acquire players that have the necessary human capital in playing basketball for the team (Wright et al., 1994). The unique history of a firm, causal ambiguity, and social complexity may lead the specific human capital of human resources to be inimitable. The unique history of an NCAA basketball team may influence the type of players that are acquired by a team and also how the players are developed. Also, specific to this study, the performance of an NCAA basketball team may be causally ambiguous because it may not be known exactly how the human capital of the team combines in order for it to perform at a high level. The human capital of an NCAA basketball team may also be inimitable because it is socially complex. Other teams most likely will not be able to duplicate the social interactions that take place with members of another team that make the team successful. Finally, the specific human capital inherent in human resources may provide a competitive advantage because it is non-substitutable. Specifically on an NCAA basketball team, it is unlikely that the human capital of a specific team could be replaced and the team would still function effectively. Also, even if the same set of players was to move to another team together, it is unlikely that the dynamics that the players had with one team would be the same with another team.

The social capital inherent in human resources may be valuable, rare, inimitable, and non-substitutable, thus creating a competitive advantage. In this study, the stability of the relationships among NCAA basketball players was measured to assess social

capital. First, the social capital of NCAA basketball teams may be a source of added value because as players play together longer, they are able to share knowledge with each other and coordinate their activities more effectively. Second, the social capital of NCAA basketball teams may be rare because, teams may suffer high turnover. Some teams may have players that leave the team early for the NBA draft or become academically ineligible to play. Thus, teams that are able to keep players with the team for a longer period of time may be rare. The unique history of a firm, causal ambiguity, and social complexity may lead the social capital of human resources to be inimitable. The unique history of an NCAA basketball team may encourage players to stay with a team. Social capital is also causally ambiguous because it may not be known what exactly it is about the relationships among players on one team that make it successful. For example teams may not know whether it is the knowledge shared among teammates or the physical synchronization that develops over time among teammates that make a team successful. The social capital of basketball players is also socially complex as teammates play together over time, there will be countless social interactions that take place. These social interactions could include sharing knowledge about the game or conversations about how the team can play together more effectively. Finally, the social capital of a team cannot be easily substituted. It is unlikely that all of the aspects associated with social capital, including: the sharing of knowledge, increased decision making, and synchronization could be substituted for or replaced.

This study also empirically tested the systems perspective of strategic human resource management and helped to fill a gap in the literature by examining human

resource behaviors. According to Wright et al. (1994: 319-20), "the human resource capital pool is a necessary but not sufficient condition for human resources to act as a source of competitive advantage. The potential of human resource capital is realized only to the extent that the possessors of the human capital allow the firm to benefit from the capital through their behavior." This study found human capital and social capital were each positively related to coordination behaviors. Thus, the task specific human capital and social capital of NCAA basketball teams had a positive influence on the coordination behaviors of the team. Also, coordination was found to positively influence performance. Thus, the greater coordination exhibited by NCAA basketball teams, the greater the teams performed. This study also found that coordination behaviors at least partially mediated the relationships between human capital and performance and social capital and performance. Thus, to some degree through their behaviors, the players on NCAA basketball teams influenced team performance. By showing that human resource behaviors at least partially mediated the relationships between human capital and performance and social capital and performance, this study demonstrated that it not only important for human resources to possess specific human capital and social capital, but also to exhibit the behaviors necessary for an organization to be successful.

5.3 Limitations

While the results of the hypothesized relationships in this study remained stable over a two year period of time, there are limitations with generalizability of the sample of NCAA basketball teams used in this study. First, the human resource skills that influence

the success of a basketball team are arguably different from the business skills that may influence the success of a work team in a business. Second, the measures of overall performance for an NCAA basketball team differ from the measures of overall performance (e.g., profitability, ROI) for a strategic business unit in a firm (Wright et al., 1995). These differences limit the generalizability of the results of this study. While there are differences between NCAA men's basketball teams and business firms, there are also similarities between the two. First, each is in a highly competitive environment that has standard measures of performance. Second, both basketball teams and business firms enact strategies aimed at improving their competitive position. Third, both types of firms rely on human resources for performance (Wright et al., 1995). Consequently, while it is not suggested that every result of this study is generalizable to business organizations, the results do demonstrate that at least in this situation, human capital, social capital, and behavioral measures are related to organizational success.

There is also a limitation with the measures of human capital used in this study. The measure of players' human capital used in this study was an accepted industry proxy for human capital. Empirical research on human capital has tended to rely on proxies as well, however, most of the existing research does not attempt to use accepted industry proxies, as they most likely do not exist (e.g., Hitt et al., 2001). Rivals provided an objective third party measure of basketball players' human capital and as mentioned previously is also widely cited in NCAA Division One men's basketball. Different from Wright et al. (1995) where coaches assessed the human capital of their own players, Rivals' expert talent scouts rate players that they do not necessarily have a vested interest

in, unlike coaches. The strength of Rivals ratings is demonstrated in the results that indicate a third party measure of human capital positively influenced both performance and behavior. The measures of head coaches' human capital (number of games as a head coach and winning percentage as a head coach) were also proxies. Although no accepted industry proxy exists, this measure is consistent with other attempts to find suitable proxies for human capital (e.g., Pfeffer & Davis-Blake, 1986). Future research should attempt to improve upon the measures of human capital for the industry being studied (Datta, Guthrie, & Wright, 2005).

The measure of coordination used in this study is a proxy measure derived from teams' assist to turnover ratio. While this measure is a proxy, the assist to turnover ratio is an industry accepted measure. The assist to turnover ratio also provides a team level measure of coordination as each player on a team can make or contribute to an assist or turnover.

5.4 Future Research

In order for the field of strategic human resource management to move forward, a greater emphasis should be placed on examining various aspects of the human resource capital pool and their associated influences on organizational performance. Future research could examine relationships among organizational strategy, the human resource capital pool, human resource practices, human resource behaviors, and organizational performance. Research could examine the human capital that is necessary for an organization based on the strategy of the organization. Along these same lines, future

research could examine the human resource practices of an organization and how they assist an organization in acquiring, developing, and retaining the human resources necessary for the organization's strategy to be successful. Additionally, future research could examine human resource behaviors that are necessary based on the strategy of the organization. Future research could also examine the human resource practices that are necessary to help elicit the required behaviors from human resources for the organization to be successful.

While this study found human resource behaviors may play a mediating role between characteristics of the workforce and performance, previous models have indicated that human resource practices may influence characteristics and behaviors of the workforce (e.g., Delery and Shaw, 2001; Wright and McMahan, 1992). Thus, future research should consider the influence of human resource practices on characteristics of the workforce and how these characteristics influence behaviors of the workforce and ultimately performance.

Research in strategic human resource management that has examined human capital has tended to use general or generic measures of human capital (e.g., Carmeli & Schaubroeck, 2005, Lopez-Cabrales et al., 2006; Takeuchi et al., 2007). Therefore, future research may begin to examine more specific human capital. The human capital that is necessary for an organization or job may have greater potential to provide a competitive advantage than more generic human capital which could easily be transferred across organizations. Examining specific human capital at the organization level may not only be difficult, but nearly impossible, therefore research may need to take place at the

department, job, team, or individual levels of analysis. In larger organizations, different teams, jobs, or departments may require different types of human capital and behaviors that influence the performance of organizations. Thus, future research on specific human capital and behaviors may begin at levels of analysis lower than the firm level.

Future research in strategic human resource management may also examine different aspects of the human capital pool such as social capital. The current study found that the stability of relationships of social capital (overlapping tenure) positively influenced organizational performance. Other aspects of social capital such as network ties, communications between individuals, associability, and trust could be examined in future research. Human resource practices may also play a role in influencing the social capital of the human resources of an organization. Therefore, future research could examine what human resource practices influence the development of social capital and how human resource practices influence the development of social capital. Future research could also examine the influence that social capital has on the behaviors of human resources. Social capital may influence a variety of behaviors that may be beneficial to organizations and future research could examine their associated influences on organizational performance.

Lastly, future research could take a multi-level approach to strategic human resource management. As there are a variety of organization level variables such as strategy and human resource practices that influence lower levels of analysis, multi-level research could provide a fruitful avenue for future research in strategic human resource management. While organizations may have strategies and human resources practices at

the organizational level, as organizations become more diversified and organized into different strategic business units, these strategic business units may have their own strategies and human resource practices. Therefore, individual in the same organization may be part of different strategies and experience different human resource practices based on the strategic business unit. For example, different strategies and human resource practices influence human capital, social capital, behaviors, and performance at the department, job, team, or individual level and these may all have influences on the overall performance of the organization. Thus, a multi-level approach may be able to better examine how variables at different levels of analysis ultimately influence performance at the organizational level.

5.5 Managerial Implications

The results of the study have implications for the management of organizations. This study demonstrates the importance of human resources to the success of organizations. It is important for organizations to not only select individuals with high levels of human capital, but also retain these individuals. As the results of this study show, high quality human capital and the overlapping tenure of human resources are related to greater organizational performance. It is important to note, that at least in the sample employed for this study, that the human capital of the players was much more important to the success of the team than the human capital of the leader. Therefore, while the ability of leaders to plan, organize, lead, and control are important, it may be

more important for leaders to effectively attract, select, and retain human resources with high quality human capital.

This study also demonstrated the importance of human resource behaviors to the performance. While human capital and social capital are important to the success of organizations, it is also important that human resources exhibit the desired behaviors for the organization to be successful. Through their behaviors, human resources put their human and social capital to work for the organization. Therefore, organizations can only benefit from the human and social capital inherent in human resources through the behaviors of the human resources (Wright et al., 1994). It thus, becomes important for organizations to attract, select, and retain individuals that demonstrate the necessary behaviors for the organization to be successful. Overall, once on organization has a strategy in place, it is important for the organization to select and retain individuals with the necessary human capital and exhibit the necessary behaviors to execute and ultimately make the strategy of the organization successful.

CHAPTER 6

CONCLUSION

The conceptual relationships that provide the foundation of the study of strategic human resource management were developed by Wright and McMahan (1992). Following the development of a model of strategic human resource management (Wright & McMahan, 1992), empirical work in strategic human resource management almost exclusively examined the relationship between human resource practices and organizational performance (e.g., Arthur, 1994; Delery & Doty, 1996; Huselid, 1995). While the model provided for relationships among firm strategy, human resource practices, the human capital pool, human resource behaviors, and performance, it did not conceptualize a relationship between human resource practices and organizational performance without considering people behaviors. Recognizing the empirical focus on the relationship between human resource practices and organizational performance, McMahan, Virick, and Wright (1999) revised the original model to recognize the direct link between human resource practices and performance. Human resource practices have continued to be the focus of strategic human resource management research (e.g., Guthrie, 2001; Combs et al., 2006), while human capital has received little attention (e.g., Takeuchi et al., 2007; Ployhart, Weekley, & Ramsey, in press), and human resource behaviors have received even less attention (Sun et al., 2007).

This study addressed a gap in strategic human resource management by examining relationships among human capital, social capital, human resource behaviors, and performance. The findings of this study indicate the importance of high quality human capital and retaining these human resources, so that they are able to develop stable relationships and social capital to organizations. Also, by examining human resource behaviors and finding that they are related to higher organizational performance, the current study demonstrates that human capital and social capital are necessary but not sufficient for organizations to perform at higher levels (Wright et al., 1994). The results of this study show that through their behaviors, human resources allow organizations to maximize the benefit obtained from their human and social capital. Therefore, it becomes increasing important for an organization to not only acquire and retain individuals with higher levels of human and social capital, but they must also exhibit the necessary behaviors for the organization to be successful.

For example, in the current study players' human capital and head coaches' human capital explained an incremental 52% of the variance in performance measured as Sagarin's rankings for the 2006-2007 season and an incremental 46% of performance in the 2007-2008 season. Players' human capital alone explained an incremental 47% of the variance in performance for the 2006-2007 season and an incremental 42% of variance in the 2007-2008 season. Additionally, when performance was regressed on players' and head coaches' human capital along with the social capital variables, an incremental 56% of the variance in performance was explained for the 2006-2007 season and an incremental 49% of the variance was explained in the 2007-2008 season. Turning to

human resource behaviors, players' coordination explained an incremental 41% of the variance in performance for the 2006-2007 season and an incremental 37% of performance in the 2007-2008 season. When performance was regressed simultaneously on players' human capital and players' coordination, an incremental 65% of the variance in performance was explained for the 2006-2007 season and an incremental 60% of the variance in performance was explained for the 2007-2008 season.

The findings in this study present an opportunity for further revision of the relationships associated with the study of strategic human resource management (Wright & McMahan, 1992; McMahan, Virick, & Wright, 1999). While the revised model still provides for relationships among, strategy, human resource practices, human resource capital, human resource behaviors, and performance, it does have some differences from previous models of strategic human resource management. For example, strategic human resource capital is further defined to include both human capital and social capital and a direct relationship with organizational performance with indicated. Additionally, human resource behaviors act as a mediator between human resource capital and performance as organizations benefit from the human and social capital of human resources through the behaviors of the human resources (Wright et al., 1994). The revised model also emphasizes the vertical and horizontal fit of human resource practices developed by Wright and McMahan (1992). Vertical fit is indicated by the relationships between human resource practices and organizational strategy, therefore human resource practices should be aligned with the strategy of the organization. Horizontal fit is indicated by the human resource practices themselves being aligned with each other.

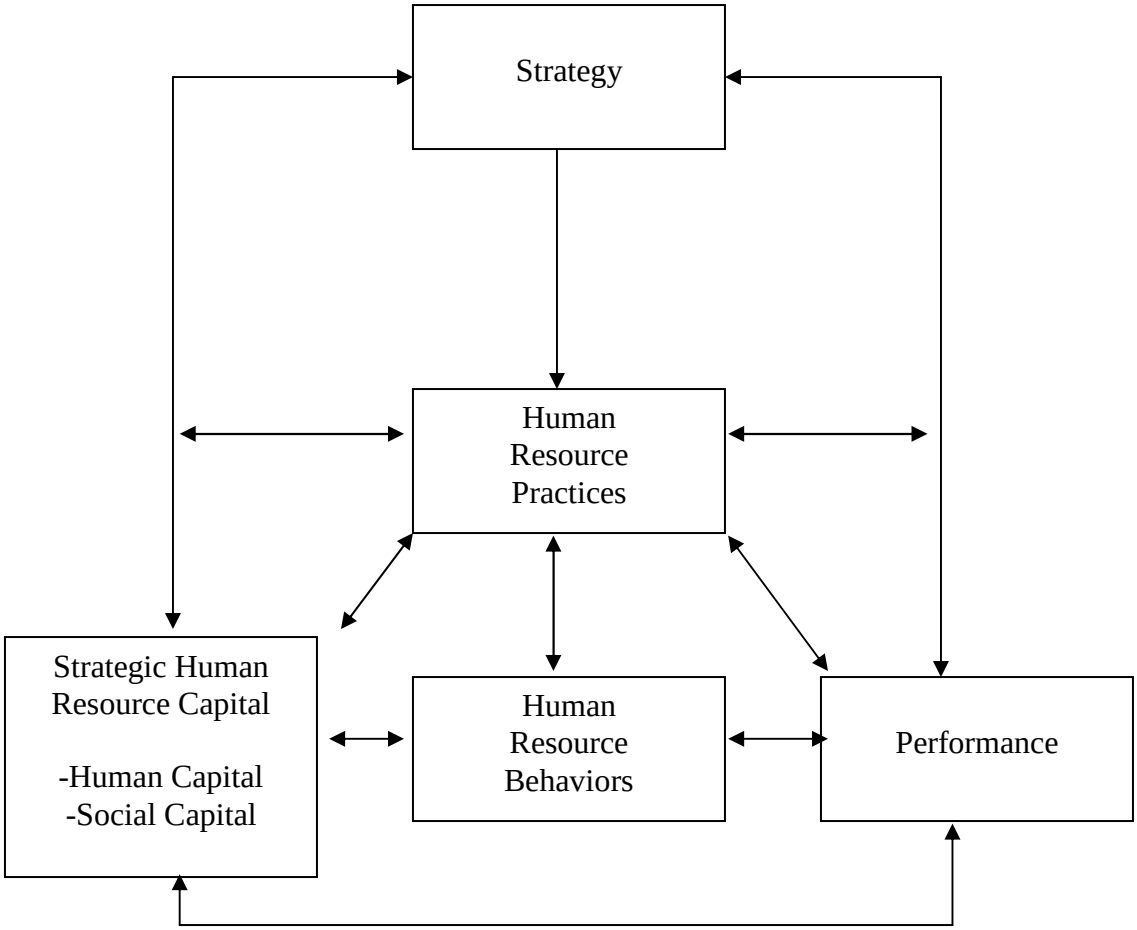

Figure 3: Revised Model of Major Relationships in
Strategic Human Resource Management

Additionally, the revised model continues to demonstrate that human resource behaviors mediate the relationship between human resource practices and performance. Thus, human resource practices influence the behaviors of the workforce and through these behaviors, greater organizational performance is achieved. Additionally, human resource practices may have an influence on the human resource capital pool and similarly, the human resource capital pool may influence the types of human resource

practices implemented by an organization. Thus, the human resource practices of an organization should be aligned with the human resource capital pool. The revised model also points to the importance of an organization's strategy in influencing the human resource practices, human resource capital pool, and human resource behaviors which then influence the performance of the organization. It is important for an organization to implement human resource practices that are aligned with the organization's strategy. Therefore, the human resource practices can assist the organization in attracting, selecting, and retaining human resources with the human and social capital required by the organization's strategy that also perform the required behaviors for the strategy to be successful. Overall, the revised model stresses the importance of the alignment of organizational strategy, human resource practices, human resource capital, human resource behaviors, and their associated influences on organizational performance.

In conclusion, empirical work in strategic human resource management has focused on the relationship between human resource practices and organizational performance. With the abundance of studies available that have examined the link between human resource practices and performance, a meta-analysis of the relationship was conducted and found that approximately 20% of the variance in performance is explained by human resource practices (Combs et al., 2006). In the current study, a different approach to strategic human resource management was taken by placing an emphasis on the human resource capital pool and examining relationships among human capital, social capital, behaviors, and performance. The results of this study indicate that human resource capital and human resource behaviors explain a greater amount of

variance in organizational performance and thus, should be a primary focus in strategic human resource management research going forward. These findings are important to strategic human resource management as they demonstrate that in this situation human resource capital, made up of human capital and social capital along with the associated human resource behaviors explain more than twice the amount of variance that human resource practices explain in performance. Therefore, greater attention should be paid to human capital, social capital, and human resource behaviors, not only in strategic human resource management research, but also within the management of contemporary organizations.

APPENDIX A

TABLES OF RESULTS

Table 1
Means, Standard Deviations, and Correlations 2006-2007 Season

Variable	Mean	s.d.	Team Size	Players' Human Capital	Number of Games as Head Coach	Winning Percentage as Head Coach	Player Overlapping Tenure	Players Overlapping Tenure with their Head Coach	Coordination	Sagarin Ranking
Team Size	14.43	1.70								
Players' Human Capital	.72	.89	-.21**							
Number of Games as Head Coach	275.15	241.66	-.04	.28**						
Winning Percentage as Head Coach	.49	.21	-.06	.35**	.55**					
Player Overlapping Tenure	1.61	.28	-.17**	.10	.05	.10				
Players Overlapping Tenure with their Head Coach	1.93	.56	-.06	.12	.34**	.45**	.49**			
Coordination	.95	.18	-.11	.36**	.20**	.32**	.23**	.20**		
Sagarin Ranking	161.87	95.22	.14*	-.70**	-.33**	-.46**	-.29**	-.27**	-.65**	
Team Winning Percentage	.51	.17	-.12*	.46**	.24**	.39**	.34**	.34**	.61**	-.83**

n = 314, * p < .05, ** p < .01

Table 2
Means, Standard Deviations, and Correlations 2007-2008 Season

Variable	Mean	s.d.	Team Size	Players' Human Capital	Number of Games as Head Coach	Winning Percentage as Head Coach	Player Overlapping Tenure	Players Overlapping Tenure with their Head Coach	Coordination	Sagarin Ranking
Team Size	14.43	1.75								
Players' Human Capital	.86	.91	-.18*							
Number of Games as Head Coach	291.49	250.10	-.11	.21**						
Winning Percentage as Head Coach	.51	.18	-.07	.36**	.53**					
Player Overlapping Tenure	1.61	.26	-.05	.02	.09	.10				
Players Overlapping Tenure with their Head Coach	1.88	.54	-.10	.11	.28**	.36**	.45**			
Coordination	.95	.19	-.08	.33**	.25**	.32**	.20**	.14**		
Sagarin Ranking	162.85	95.91	.16**	-.67**	-.23**	-.42**	-.17**	-.22**	-.62**	
Team Winning Percentage	.52	.17	-.09	.37**	.17**	.32**	.22**	.26**	.62**	-.82**

n = 319, * p < .05. ** p < .01

Table 3
Correlations between Variables in 2006-2007 Season and 2007-2008 Season

Variable	Correlation between 2006-2007 Season and 2007-2008 Season
Team Size	.08
Player's Human Capital	.88**
Number of Games as Head Coach	.33**
Winning Percentage as Head Coach	.18**
Player Overlapping Tenure	.04
Players Overlapping Tenure with their Head Coach	.15**
Coordination	.40**
Sagarin Ranking	.56**
Team Winning Percentage	.25**

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

Table 4
Regression Analyses Results of Human Capital and Overlapping Tenure Predicting Performance (Sagarin Rankings 2006 – 2007 Season)

Variable	Model 1	Model 2	Model 3	Model 4
Team Size	.14*	-.01	-.04	-.05
Human Capital Variables				
Players' Human Capital		-.61**	-.60**	-1.14**
Number of Games as Head Coach		-.03	-.04	-.10
Winning Percentage as Head Coach		-.23**	-.22**	-.20**
Social Capital Variables				
Player Overlapping Tenure			-.23**	-.28**
Players Overlapping Tenure with their Head Coach			.03	.03
Interactions				
Players' Human Capital x Number of Games as Head Coach				.14
Players' Human Capital x Winning Percentage as Head Coach				.04
Players Human Capital x Player Overlapping Tenure				.42
Total R^2	.02*	.54	.58	.58
ΔR^2		.52**	.04**	.00

n = 315
*p < .05
**p < .01

Table 5
Regression Analyses Results of Human Capital and Overlapping Tenure Predicting Performance (Team Winning Percentage 2006 – 2007 Season)

Variable	Model 1	Model 2	Model 3	Model 4
Team Size	-.12*	-.03	.02	.02
Human Capital Variables				
Players' Human Capital		.37**	.36**	.52**
Number of Games as Head Coach		-.02	-.03	.02
Winning Percentage as Head Coach		.27**	.22**	.16*
Social Capital Variables				
Player Overlapping Tenure			.25**	.30**
Players Overlapping Tenure with their Head Coach			.08	.07
Interactions				
Players' Human Capital x Number of Games as Head Coach				-.10
Players' Human Capital x Winning Percentage as Head Coach				.28
Players Human Capital x Player Overlapping Tenure				-.34
Total R^2	.01*	.27	.36	.36
ΔR^2		.26**	.09**	.00

n = 315
*p < .05
**p < .01

Table 6
Regression Analyses Results of Human Capital and Overlapping Tenure Predicting Performance (Sagarin Rankings 2007 – 2008 Season)

Variable	Model 1	Model 2	Model 3	Model 4
Team Size	.16**	.03	.04	.04
Human Capital Variables				
Players' Human Capital		-.59**	-.60**	-.71**
Number of Games as Head Coach		.01	.02	.04
Winning Percentage as Head Coach		-.21**	-.19**	-.22**
Social Capital Variables				
Player Overlapping Tenure			-.13**	-.13**
Players Overlapping Tenure with their Head Coach			-.03	-.03
Interactions				
Players' Human Capital x Number of Games as Head Coach				-.03
Players' Human Capital x Winning Percentage as Head Coach				.16
Players Human Capital x Player Overlapping Tenure				.00
Total R^2	.03**	.49	.51	.51
ΔR^2		.46**	.02**	.00

n = 319
*p < .05
**p < .01

Table 7
Regression Analyses Results of Human Capital and Overlapping Tenure Predicting Performance (Team Winning Percentage 2007 – 2008 Season)

Variable	Model 1	Model 2	Model 3	Model 4
Team Size	-.09	-.02	-.02	-.03
Human Capital Variables				
Players' Human Capital		.29**	.29**	-.07
Number of Games as Head Coach		-.01	-.03	-.09
Winning Percentage as Head Coach		.22**	.18**	.17
Social Capital Variables				
Player Overlapping Tenure			.16**	.13
Players Overlapping Tenure with their Head Coach			.10	.10
Interactions				
Players' Human Capital x Number of Games as Head Coach				.10
Players' Human Capital x Winning Percentage as Head Coach				.13
Players Human Capital x Player Overlapping Tenure				.19
Total R^2	.01	.18	.22	.23
ΔR^2		.17**	.04**	.01

n = 319
*p < .05
**p < .01

Table 8
Regression Analyses Results of Human Capital and Overlapping Tenure Predicting Coordination in the 2006 – 2007 Season

Variable	Model 1	Model 2	Model 3
Team Size	-.11	-.03	.00
Human Capital Variable			
Players' Human Capital		.36**	.34**
Social Capital Variable			
Player Overlapping Tenure			.19**
Total R^2	.01	.13	.17
ΔR^2		.12**	.04**

n = 314
*p < .05
**p < .01

Table 9
Regression Analyses Results of Human Capital and Overlapping Tenure Predicting Coordination in the 2007 – 2008 Season

Variable	Model 1	Model 2	Model 3
Team Size	-.08	-.01	.02
Human Capital Variable			
Players' Human Capital		.33**	.33**
Social Capital Variable			
Player Overlapping Tenure			.19**
Total R^2	.01	.11	.14
ΔR^2		.10**	.03**

n = 314
*p < .05
**p < .01

Table 10
Coordination as a Mediator Between Players' Human Capital and Performance
(Sagarin Rankings 2006-2007 Season)

Dependent Variable	Coordination		Dependent Variable	Performance		Dependent Variable	Performance		Dependent Variable	Performance	
Independent Variable Step1	Step 1	Step 2	Independent Variable Step1	Step 1	Step 2	Independent Variable Step1	Step 1	Step 2	Independent Variable Step1	Step 1	Step 2
Size	-.11	-.03	Size	.14*	-.02	Size	.14*	.07	Size	.14*	-.03
Step 2 Players' Human Capital		.36**	Step 2 Players' Human Capital		-.70**	Step 2 Coordination		-.64**	Step 2 Players' Human Capital		-.54**
									Coordination		-.46**
R^2	.01	.13	R^2	.02*	.49	R^2	.02*	.43	R^2	.02*	.67
ΔR^2		.12**	ΔR^2		.47**	ΔR^2		.41**	ΔR^2		.65**

n = 314
* p < .05
** p < .01

Table 11
Coordination as a Mediator Between Players' Human Capital and Performance
(Team Winning Percentage 2006-2007 Season)

Dependent Variable	Coordination		Dependent Variable	Performance		Dependent Variable	Performance		Dependent Variable	Performance	
Independent Variable Step1	Step 1	Step 2	Independent Variable Step1	Step 1	Step 2	Independent Variable Step1	Step 1	Step 2	Independent Variable Step1	Step 1	Step 2
Size	-.11	-.03	Size	-.12*	-.02	Size	-.12*	-.06	Size	-.12*	-.01
Step 2 Players' Human Capital		.36**	Step 2 Players' Human Capital		.46**	Step 2 Coordination		.60**	Step 2 Players' Human Capital		.28**
									Coordination		.51**
R^2	.01	.13	R^2	.01*	.22	R^2	.01*	.38	R^2	.01*	.44
ΔR^2		.12**	ΔR^2		.21**	ΔR^2		.37**	ΔR^2		.43**

n = 314
* p < .05
** p < .01

Table 12
Coordination as a Mediator Between Players' Human Capital and Performance
(Sagarin Rankings 2007-2008 Season)

Dependent Variable	Coordination		Dependent Variable	Performance		Dependent Variable	Performance		Dependent Variable	Performance	
Independent Variable Step1	Step 1	Step 2	Independent Variable Step1	Step 1	Step 2	Independent Variable Step1	Step 1	Step 2	Independent Variable Step1	Step 1	Step 2
Size	-.08	-.01	Size	.16**	.03	Size	.16**	.11*	Size	.16**	.03
Step 2 Players' Human Capital		.33**	Step 2 Players' Human Capital		-.67**	Step 2 Coordination		-.61**	Step 2 Players' Human Capital		-.52**
									Coordination		-.45**
R^2	.01	.11	R^2	.03**	.45	R^2	.03**	.40	R^2	.03**	.63
ΔR^2		.10**	ΔR^2		.42**	ΔR^2		.37**	ΔR^2		.60**

n = 319
* p < .05
** p < .01

Table 13
Coordination as a Mediator Between Players' Human Capital and Performance
(Team Winning Percentage 2007-2008 Season)

Dependent Variable	Coordination		Dependent Variable	Performance		Dependent Variable	Performance		Dependent Variable	Performance	
Independent Variable Step1	Step 1	Step 2	Independent Variable Step1	Step 1	Step 2	Independent Variable Step1	Step 1	Step 2	Independent Variable Step1	Step 1	Step 2
Size	-.08	-.01	Size	-.09	-.02	Size	-.09	-.04	Size	-.09	-.01
Step 2 Players' Human Capital		.33**	Step 2 Players' Human Capital		.37**	Step 2 Coordination		.61**	Step 2 Players' Human Capital		.18**
									Coordination		.55**
R^2	.01	.11	R^2	.01	.14	R^2	.01	.38	R^2	.01	.41
ΔR^2		.10**	ΔR^2		.13**	ΔR^2		.37**	ΔR^2		.40**

n = 319
* p < .05
** p < .01

Table 14
Coordination as a Mediator Between Player Overlapping Tenure and Performance
(Sagarin Rankings 2006-2007 Season)

Dependent Variable	Coordination		Dependent Variable	Performance		Dependent Variable	Performance		Dependent Variable	Performance	
Independent Variable	Step 1	Step 2	Independent Variable	Step 1	Step 2	Independent Variable	Step 1	Step 2	Independent Variable	Step 1	Step 2
Step1			Step1			Step1			Step1		
Size	-.11	-.07	Size	.14*	.09	Size	.14*	.07	Size	.14*	.05
Step 2			Step 2			Step 2			Step 2		
Player Overlapping Tenure		.22**	Player Overlapping Tenure		-.28**	Coordination		-.64**	Player Overlapping Tenure		-.14**
									Coordination		-.61**
R^2	.01	.06	R^2	.02*	.09	R^2	.02*	.43	R^2	.02*	.45
ΔR^2		.05**	ΔR^2		.07**	ΔR^2		.41**	ΔR^2		.43**

n = 314
* p < .05
** p < .01

Table 15
Coordination as a Mediator Between Player Overlapping Tenure and Performance
(Team Winning Percentage 2006-2007 Season)

Dependent Variable	Coordination		Dependent Variable	Performance		Dependent Variable	Performance		Dependent Variable	Performance	
Independent Variable Step1	Step 1	Step 2	Independent Variable Step1	Step 1	Step 2	Independent Variable Step1	Step 1	Step 2	Independent Variable Step1	Step 1	Step 2
Size	-.11	-.07	Size	-.12*	-.07	Size	-.12*	-.06	Size	-.12*	-.03
Step 2 Player Overlapping Tenure		.22**	Step 2 Player Overlapping Tenure		.33**	Step 2 Coordination		.61**	Step 2 Player Overlapping Tenure		.21**
									Coordination		.56**
R^2	.01	.06	R^2	.01*	.12	R^2	.01*	.38	R^2	.01*	.42
ΔR^2		.05**	ΔR^2		.11**	ΔR^2		.37**	ΔR^2		.41**

n = 314
* p < .05
** p < .01

Table 16
Coordination as a Mediator Between Player Overlapping Tenure and Performance
(Sagarin Rankings 2007-2008 Season)

Dependent Variable	Coordination		Dependent Variable	Performance		Dependent Variable	Performance		Dependent Variable	Performance	
Independent Variable Step1	Step 1	Step 2	Independent Variable Step1	Step 1	Step 2	Independent Variable Step1	Step 1	Step 2	Independent Variable Step1	Step 1	Step 2
Size	-.08	-.08	Size	.16**	.17**	Size	.16**	.11*	Size	.16**	.12*
Step 2 Player Overlapping Tenure		.20**	Step 2 Player Overlapping Tenure		-.18**	Step 2 Coordination		-.61**	Step 2 Player Overlapping Tenure		-.05
									Coordination		-.60**
R^2	.01	.04	R^2	.03**	.06	R^2	.03**	.40	R^2	.03**	.40
ΔR^2		.03**	ΔR^2		.03**	ΔR^2		.37**	ΔR^2		.37**

n = 319
* p < .05
** p < .01

Table 17
Coordination as a Mediator Between Player Overlapping Tenure and Performance
(Team Winning Percentage 2007-2008 Season)

Dependent Variable	Coordination		Dependent Variable	Performance		Dependent Variable	Performance		Dependent Variable	Performance	
Independent Variable Step1	Step 1	Step 2	Independent Variable Step1	Step 1	Step 2	Independent Variable Step1	Step 1	Step 2	Independent Variable Step1	Step 1	Step 2
Size	-.08	-.08	Size	-.09	-.10	Size	-.09	-.04	Size	-.09	-.05
Step 2 Player Overlapping Tenure		.20**	Step 2 Player Overlapping Tenure		.23**	Step 2 Coordination		.61**	Step 2 Player Overlapping Tenure		.11*
									Coordination		.59**
R^2	.01	.04	R^2	.01	.06	R^2	.01	.38	R^2	.01	.39
ΔR^2		.03**	ΔR^2		.05**	ΔR^2		.37**	ΔR^2		.38**

n = 319
* p < .05
** p < .01

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