EXAMINING GENERAL MANAGERS IN THE NORTH AMERICAN PROFESSIONAL SPORT CONTEXT: UPPER ECHELONS AND LOGICS OF ACTION AS DETERMINANTS OF PERFORMANCE

by

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Abstract

This study integrates and extends the literature on upper echelons theory (UET) and institutional theory by investigating general manager (GM) strategic decision making in the North American professional sport context. This research examines individual contextual variables and the institutional environment in each league as they impact the human resource (HR) decision making tendencies of GMs. Through the application of UET and institutional theory, a model is developed which posits that individual GM attributes shape their strategic decision making with respect to athlete resource acquisitions which subsequently impacts organizational performance on the competitive field of play. Data on a 13-year sample of GMs are collected and analyzed to test hypotheses predicting relationships between GM tenure, functional experience, technical experience, age and organizational performance. Concurrently, data on individual logics of action proposed to act as contingencies in the GM – HR decision making relationship are collected and tested as moderator variables. Implications of this research are discussed for both academic research and practice. Future directions for UET research in the sport context are suggested.

Chapter 1

Introduction

1.1 The Professional Sport Context

1.1.1 Economic and societal impact

Professional sport continues to grow in terms of its economic and cultural impact on society in North America. Broadly, professional sport leagues may include groups of organizations of many different sizes in terms of number of teams and economic impact. For this dissertation, I define the North American professional sport context as a combination of the four major leagues including the National Football League (NFL), the National Hockey League (NHL), Major League Baseball (MLB), and the National Basketball Association (NBA). Other, larger professional leagues such as Major League Soccer (MLS) were not included due to their relative youth as compared with the four established leagues included in the analysis. The NFL is comprised of 32 organizations. Based on financial data from 2011 in Forbes Magazine, the combined value of all 32 organizations was approximately \$33 billion while total revenues exceeded \$8.3 billion (NFL, 2012). The NHL is comprised of 30 organizations. Based on financial data from 2011 in Forbes Magazine, the combined value of all 30 organizations was approximately \$7.2 billion while total aggregate revenues reached \$3.09 billion (NHL, 2012). MLB is comprised of 30 organizations. Based on financial data from 2011 in Forbes Magazine,

the combined value of all 30 organizations was approximately \$15.6 billion while total aggregate revenues reached \$6.1 billion (MLB, 2012). The NBA is comprised of 30 organizations. Based on financial data from 2011 in Forbes Magazine, the combined value of all 30 organizations was approximately \$11 billion while total revenues (net of revenue sharing) reached nearly \$4 billion (NBA, 2012). In sum, the organizations comprising the four analyzed leagues were valued at more than \$67 billion and generated approximately \$21.4 billion in revenues based on data from 2011. For comparison purposes, major corporations including Nike, Aflac, and Xerox each reported annual revenues of between \$20 and \$25 billion on the most recently released Fortune 500 list (Fortune 500, 2012).

In addition to the large economic impact these leagues demonstrate, the viewership potential of each league is noteworthy. In 2011, MLB's World Series saw total cumulative viewership of nearly 113 million people over seven games here in the U.S (World Series, 2012) while the 2011 NBA Finals saw total cumulative viewership of approximately 103 million domestic viewers over seven games (NBA Finals, 2011). During the same year, the NHL's Stanley Cup Finals drew approximately 35 million domestic viewers over a seven game series (NHL Stanley Cup Finals, 2012) and the NFL's Super Bowl drew approximately 111 million viewers (Super Bowl, 2012). Also, the television contracts that each league negotiates with various networks and media entities demonstrate a large economic impact. The NFL recently negotiated a new television contract with Fox, NBC, CBS and ESPN that will pay the league approximately \$7 billion per year starting in 2014 for broadcast rights (NFL TV, 2012). In 2006, MLB signed a seven year contract with Fox worth more than \$400 million

annually (MLB TV, 2011). In 2007, the NBA reached an agreement with ESPN/ ABC and TNT on an eight year contract extension for its television rights, paying the league more than \$765 million per year (NBA TV, 2011). Lastly, the NHL recently negotiated a new television contract expected to pay the league more than \$200 million annually (NHL TV, 2012).

With respect to fan viewership and attendance, data from the 2010 – 2011 seasons for each of the four leagues included in this research indicate attendance figures of approximately 73 million for MLB (MLB Attendance, 2012), 21.3 million for the NBA (NBA Attendance, 2012), 20.9 million for the NHL (NHL Attendance, 2012), and 17.1 million for the NFL (NFL Attendance, 2012). In addition to the aforementioned financial impacts of these four leagues, the attractiveness of each to consumers as entertainment options bears mentioning to further accentuate the impact of these sports on American culture.

Thus, as these four leagues generate a combined \$21.4 billion in annual revenues, attract hundreds of millions of television viewers through media contracts worth billions of dollars while drawing more than 130 million fans annually, it is surprising that these contexts have not been utilized more frequently as research settings to examine organizational phenomena. By applying management theory to examine these organizations, we can gain a better understanding of how these organizations function and what drives their performance from a managerial perspective. As a result, studies with this focus will provide insights into similarities and unique aspects of these teams and the contexts in which they compete. For example, how do managerial decisions differ for organizations in which front-line employees (i.e. the athletes) are the primary

determinants of performance via their actions on the field of play? How does an organization's structure dictate the ultimate success or failure in organizations where one employee, typically the general manager (GM), executes player personnel decisions? From a practical standpoint, the investigation of top management team (TMT) employees in this context is warranted due to the significant financial impact that these organizations and leagues have on our society. In addition, professional sport viewership continues to increase representing the growing societal impact that sport has here in the United States. As sport has become engrained as a cultural component of our society in North America, the examination of these organizations represents an opportunity for scholars.

1.1.2 Sport leagues as organizational fields

To better understand the institutional environment of each league, I will now describe the five groups in addition to the organizations themselves that comprise each league's operating environment including a player's association, a commissioner's office, media and marketing partners, suppliers, and consumers. All of these groups serve as important institutional components of what constitutes the organizational field of each league. DiMaggio and Powell (1983) defined an organizational field as the sum of all relevant actors including suppliers, consumers, regulatory agencies and other organizations that produce similar products or services in a given environment. To elucidate the extent to which these entities influence the strategic decision making process of TMT employees and the performance of their organizations, I will elaborate on each relevant component as they relate to each of the leagues included in this dissertation.

Each league has an association serving as the union to represent the players' interests. For example, the NFL Players Association (NFLPA) purports to: represent all players in matters concerning wages and working conditions; ensure that the terms of the league's Collective Bargaining Agreement (CBA) are met; negotiate and monitor retirement and insurance benefits; provide assistance to charitable and community organizations and; enhance and defend the image of players and their profession on and off the field (NFL Players Association, 2011). The NHL Players Association (NHLPA), MLB Players Association (MLBPA), and NBA Players Association (NBAPA) serve similar interests with regards to representing the interests of the athletes that comprise each league. The most recent example of a players association negotiating a new CBA occurred in the NBA in December of 2011 where the NBAPA and the league came to terms on a new ten year agreement (NBA CBA 2012). The most contentious part of this negotiation occurred with respect to how the league and the NBAPA would split Basketball Related Income (BRI). The agreed upon split granted the players 51.15 percent in the current season with slight fluctuation possibilities in future seasons. This example demonstrates the current focus of labor negotiations in the four leagues studied with respect to revenue split discussions. As each of the four leagues is currently prospering, negotiations may be tenuous but are also typified by proactive bargaining approaches from both parties so as to maintain current momentum established through unprecedented levels of viewership, fan attendance and revenues.

In addition, each of the four leagues has a commissioner's office. Here, the commissioner of each league resides with a singular goal: to provide the leadership necessary for cooperation between stakeholder groups in the league. In addition, the

commissioner of each league must maintain a working relationship between the ownership interests of each organization and the players association comprising the field. Ultimately, each league's commissioner represents the interests of individual team ownership. Thus, decisions that are executed are purportedly made to serve the best interests of a particular league but typically demonstrate a slight bias towards serving league owners. At times, this creates conflict between the commissioner's office and the league's players association. Specifically, issues related to player discipline and player conduct sometimes create tension in the commissioner – player's union relationship.

Marketing partnerships exist in multiple forms across each of the four leagues analyzed. Most financially significant are the television contracts that each league negotiates with various networks. Each team in each league has the ability to negotiate a local television contract with the network that will show the majority of their games. In addition, teams receive an equal share of revenue from league-wide television contracts. For example, MLB distributes approximately \$400 million annually evenly amongst its 30 teams (MLB TV, 2011). While this revenue is the same for each team in MLB on an annual basis, the Minnesota Twins currently receive an additional \$29 million from their local deal with Fox Sports North while the Los Angeles Angels recently negotiated a local agreement that pays \$150 million per year (Minnesota Twins, 2012). Similar regional deals exist in the NBA and NHL on top of league-wide deals. As a result of the large amounts of dollars transacted via these agreements, the pressures exist on individual teams to enhance their value in these negotiations. However, this is a bit of a doubleedged sword in the sense that teams operating in smaller markets with fewer potential viewers are inherently at a disadvantage in these local negotiations as compared to teams

in large markets such as the Angels in MLB. Thus, labor negotiations at the league level typically include some consideration for revenue disparities across markets.

Suppliers can exist in the field of a professional sport league in several different forms. In terms of human resources, suppliers such as high school, minor leagues, international professional leagues, and the NCAA serve as important sources of athlete and coaching talent. As such, the relationships between the NCAA and each league's players association and commissioner's office are important in shaping this pattern of influence. If an organization is interested in hiring a particular athlete or coach, the manner in which they design and execute strategic decisions may be altered as compared to those teams that are already populated with athlete and coaching talent. For example, a team in the NFL may decide to trade away higher-paid veteran athletes to reduce their financial dependence and sacrifice their ability to compete in the short term so that they may position themselves for a better draft pick to improve future performance. Additional suppliers may exist in the form of equipment and stadia suppliers although neither is anticipated to significantly influence the decision making process as it relates to human resource acquisitions for teams.

Consumers of sport in these fields exist primarily in the form of fans who view games, either by watching on TV or online or by attending. As a significant portion of team revenues are derived from ticket sales and television contracts driven by potential fan viewership, appearing consumers is an important consideration for teams in each of the four leagues analyzed. Based on data previously introduced describing television viewership and attendance at the league level, it is reasonable to state that fans have a

sizable impact on each of these four leagues. Thus, GM decision making may be influenced in some capacity by the actions and demands of the fans of their team.

An illustration of these components as they combine to form an organizational field is provided in Figure 1. For the purposes of this dissertation, I will separate my research context into four distinct fields including the NFL, NBA, NHL, and MLB where each field will be considered in terms of those forces that can influence GM decision making without being constrained by league laws. Examining groups of organizations as a field allows for analyses in which relationship orientation, rules, and norms are constrained within the unique requirements of the field.

1.1.3 Notable league-level institutional changes

During the past two decades, the NHL has seen two different collective bargaining agreements (CBAs). The first was enacted in 1995 and expired at the conclusion of the 2004-2005 season (Fenn, Von Allmen, Brook, & Preissing, 2005). This CBA did not include any restrictions on inter-organizational revenue sharing nor did it include any luxury tax penalty for teams spending excessively on team player talent. In addition, team-level salary caps were not specified in this CBA and thus, there were no restrictions on how much (or how little) money each organization could spend on team player talent. The current CBA, which was ratified in 2005, includes many more provisions for revenue distribution at the league, organization, and player levels. For example, revenue sharing subsidies are earmarked for those teams that are ranked in the bottom 15 in the league in revenues and operate in demographic market areas of 2.5 million (or less) TV households (NHL CBA, 2012). In addition, it should be noted that

the time period between 1987 and 1999 saw a marked increase in the number of European born players entered the NHL (Fenn et al., 2005). Expansion has occurred in 1998 with the creation of the Nashville Predators; in 1999 with the Atlanta Thrashers; and in 2000 with the Columbus Blue Jackets and the Minnesota Wild (NHL Expansion, 2012).

MLB has seen four different CBAs during the past two decades, three of which occurred between 1997 and 2009. The first governed the league and players' association between 1996 and 2002 and instituted limited revenue sharing and a payroll tax as a means to moderating payroll disparities in hopes of improving competitive balance (MLB CBA, 1996). The CBA adopted in 2002 included a more evolved revenue-sharing system although the approach employed included a loop-hole in which smaller-market teams were able to apply funds to improve profits rather than improve their team player talent (MLB CBA, 2002). In 2006, another new CBA was ratified which further specified revenue sharing guidelines to force smaller-revenue clubs to invest revenues received from the league to improve the team's on-the-field performance rather than applying funds directly to the bottom line (MLB CBA, 2006). Recent expansion included adding the Arizona Diamondbacks and the Tampa Bay Devil Rays in 1998. Also of note, the Montreal Expos relocated to Washington and became the Nationals in 2005 (MLB Expansion, 2012).

The NBA has seen three CBAs over the past two decades, with the most recent agreement being ratified on December 8, 2011 (NBA CBA, 2011). The CBA enacted in 1999 included salary restrictions related to maximum player contracts, stipulations for veteran contracts and a luxury tax for organizations spending in excess of the established

salary cap (NBA CBA, 1999). The previous CBA had been enacted in 2005 and had served to govern league and organizational activities since 1999. Much like the other leagues being analyzed, the NBA's CBA specifies policies and restrictions related to salary cap issues, revenue sharing, and the distribution of basketball related income (NBA CBA, 2005). Unique to the NBA is the soft salary cap feature which allows for a team's payroll to exceed the cap limit under certain circumstances. This feature has been distinct to the NBA since 1984 (NBA Salary Cap, 2012). Relevant franchise relocations occurred in 2001 when the Vancouver Grizzlies moved to Memphis; in 2002 when the Charlotte Hornets moved to New Orleans; in 2004 when the Charlotte Bobcats were added as an expansion franchise; and in 2008 when the Seattle Sonics moved to Oklahoma City (NBA Expansion, 2012).

Since 1993, the NFL has been governed by two CBAs. During the range of data analyzed in this dissertation (1997-2009), a single agreement controlled the behavior of organizations comprising the league on issues related to salary allocation, interorganizational revenue sharing, and income distribution (NFL CBA, 1997). This agreement presided over league and organizational actions until the conclusion of the 2010 season. Several addenda have been made to this agreement during its 17 years of governance (Goff & Wisley, 2006). Like the other leagues included in this analysis, the NFL's CBA has evolved in an attempt to maximize competitive balance across the organizations comprising the league. Also of note, league franchise expansion occurred in 1999 with the addition of the Cleveland Browns and in 2002 with the addition of the Houston Texans (NFL Expansion, 2012).

1.2 Drivers of Performance

Organizational performance in the context of North American professional team sport is measurable in two ways. One approach considers the financial performance of an organization over some duration of time by measuring the profits generated by a team, primarily through ticket sales and league negotiated television contracts. As these profits are typically reallocated to acquire and retain human resources and in some cases, utilized to make infrastructure improvements via renovations or new construction, a case can be made for quantifying performance in this manner. Although limited data exist on annual revenues for teams comprising the research context examined in this study, Forbes publishes annual reports on organizations in each league that provide the best estimates of profits. These data could be used as a proxy for measuring performance as a function of financial viability. Another means of analyzing performance focuses on playing field performance, typically measured as a ratio of wins to the total number of games played (winning percentage) as determined by the cumulative actions of athletes competing in events sanctioned by their respective leagues (e.g., Smart & Wolfe, 2003). Although winning percentage is the statistic most representative of team performance, those teams with the highest ratio of wins to losses do not always achieve the highest possible level of success by winning the championship of their league. Thus, this approach to defining performance comes with a caveat in rare circumstances where a team wins a league title without having the highest winning percentage.

Sport organizations function as a result of the interpersonal relationships that exist between the TMT, coaches and athletes. At the top level, an owner or ownership group is responsible for establishing a formal hierarchy of employees to serve as a chain of

command for decision making, strategy development and implementation. In a typical setting, a general manager (GM) will be hired to oversee and facilitate the hiring and firing of coaches and athletes based upon the extent to which individual abilities or performance aligns with the greater goals of the organization. This dissertation will address the performance outcomes of professional sport organizations by analyzing GM decision making related to human resources through the lenses of upper echelons theory (UET) and institutional theory.

As with organizations operating in non-sport industries, I assume that the professional sport organizations included my research context are engaged in a continuous cycle of trying to improve both financial and competitive performance from the previous season. Strategic approaches to improvement can be focused on making changes to player resources in hopes of enhancing the mix of abilities of the athletes comprising the team. By achieving a higher cumulative mix of athletes with proficiencies related to offensive output and defensive prowess, improved team performance might be expected when compared to other teams operating at lower levels of cumulative team player talent. For example, if a football team is comprised of athletes who demonstrate abilities directly related to the skills leading to offensive output on the field-of-play; it is assumed that such a team would score points at a higher frequency than teams with fewer skilled athletes in similar positions.

In addition to having a roster comprised of talented athletes, another important aspect of the relationship between strategy and performance lies within the coaching staff on a team. Specifically, the overriding philosophies of the head coach with respect to strategies related to performance should align with the talents and skills of the player

talent on the roster. For example, if a football team hires a head coach who demonstrates expertise running a specific spread-style offense that requires small, quick athletes to play quarterback, running back and wide receiver, a certain type of athlete would be targeted to fill this position.

Thus, an optimum fit would be represented by a roster populated with a number of players who demonstrate attributes which complement the team's strategy, as determined by the coaching staff. To improve this fit, the GM can act in three ways. First, the organization can choose to acquire new players via free agency. This approach has received the most attention in recent years as a result of the Moneyball approach, attributed to the Oakland Athletics of MLB. Here, market inefficiencies were exploited in evaluating and signing free agents using quantitative analyses techniques (Hakes & Sauer, 2006). In addition, teams can broker player trades with other organizations to change their player mix. Also, new players can be acquired via the new player draft in which former amateur athletes are selected and signed to contracts. The intent of engaging in these activities is to improve the overall talent level while enhancing the performance potential of the team. Thus, the pursuit of achieving high levels of team performance can be achieved via three different approaches when focusing on changing the mix of players on a team.

Several studies have examined the link between coaching strategy, athlete abilities and performance in the sport context (e.g., Smart, Winfree, & Wolfe, 2008; Wright, Smart, & McMahan, 1995). Although this body of research does not include the impact of GM decision making on performance, it does link athletes to performance in a variety of sport contexts. I build on this relationship in the introduction of my conceptual

model later in this dissertation. One study investigated the relationship between coaching strategy, athlete abilities and team performance in the context of collegiate basketball in the U.S. (Wright et al., 1995). This study found that teams utilizing strategies that do not align with the preferences and expertise of its head coach achieve less success via performance on the court than those teams demonstrating a better coach-strategy fit. In addition, player skills and team performance were found to interact as a function of coaching strategies employed.

Smart et al. (2008) studied the concurrent contribution of baseball manager leadership and athlete abilities to performance in MLB. Notable findings from this study include the conclusion that athlete abilities were much more significant than a manager's leadership abilities in explaining performance variations. Another study examining coaching contribution to performance found that tenure is positively related to managerial efficiency in the NFL, NBA and MLB (Scully, 1994). Here, the author described managerial efficiency as the ability of a coach to extract the largest possible win percentage from a group of players. As a head coach spends more time within an organization in these leagues, they become more proficient at extracting maximum performance from their roster of team player talent. Thus, coaches demonstrating proficiency and expertise are more likely to maintain head coaching positions for longer durations of time in these leagues. As coaches demonstrate prolonged success, they become more attractive to competing organizations as potential hires. This effect also works in the opposite direction where coaches do not achieve success and become less attractive to their present organization as well as prospective future employers.

As such, turnover is unavoidable due to the success or failure attained by an organization during a coach's tenure. As coaches serve to prepare athletes for performance during sanctioned competitions, they occupy a central role in terms of how they can directly influence team performance. As a result, coach turnover can impact subsequent organization performance both positively and negatively. One way in which turnover occurs is when coaches leave their current job for a new opportunity within a different organization. This is an unavoidable facet of organizational life in this context and is typically dealt with by the GM or owner as they identify and aggressively pursue potential replacements. In this scenario, if the coach has established a period of sustained success employing strategies that are unique to their expertise and experiences, choosing a replacement with dramatically different philosophies can have detrimental effects on team performance. In situations where coaches fail relative to the achievement of team performance objectives as established by the TMT, turnover is also a typically utilized outcome usually accomplished through firing the coach. Through the removal of coaches as determined by the TMT, stability with respect to the athletes comprising the team can be maintained while new coaches are pursued with expertise and experiences that better align with the goals of the organization. In this vein, turnover via the firing and subsequent hiring of new coaches has been found to affect organizational performance, regardless of the quantity and quality of player resources comprising the team (Audas, Dobson, & Goddard, 2002; Brown, 1982). These studies found that in-season managerial succession in the NFL and English soccer were detrimental to near term performance as measured by wins and losses on each league's respective field of play. These findings support the notion that when new coaches are hired, TMTs should be prepared to give

them time to alter the mix of player talent to best align with their strategic approach before evaluating their performance. As such, coaching turnover can have both positive and negative effects on a team's future performance. A recent example of coaching turnover can be seen when the NBA's New York Knicks forced the resignation of head coach Mike D'Antoni, who is well known to be an offense-focused head coach with Mike Woodson, a coach with a more balanced approach to strategy in terms of his focus on both generating offense and playing solid defense (Mike D'Antoni, 2012). As such, the Knicks roster of players is expected to see an overhaul in the coming offseason so that the skills and attributes of players comprising the team more closely align with Woodson's strategic approach.

Ownership may also decide to alter the TMT by hiring or firing those employees responsible with the design and execution of strategic decisions related to player and coach personnel. This is most frequently accomplished by replacing the GM. As GMs serve to evaluate coaches and players with respect to their fit with the organization's goals, they also occupy a key role in terms of how they can directly influence team performance. As a result, GM turnover can impact subsequent organization performance both positively and negatively. GM turnover can occur when these employees leave their current job for a better opportunity within a different organization. This is often times unavoidable in this context and is typically dealt with by ownership as they identify and aggressively pursue potential replacements. In this scenario, if the GM has established a period of sustained success by acquiring a coaching staff and players that are unique and successful with respect to their expertise and experiences, choosing an inadequate replacement can have detrimental effects on team performance. In situations where GMs

ownership, turnover is also a typically utilized outcome usually accomplished through firing the GM. Through the removal of the GM as determined by ownership, stability with respect to the coaches and athletes comprising the team can be maintained while new GMs are pursued with expertise and experiences that better align with the goals of the organization. For example, on October 4, 2010, ownership of MLB's New York Mets fired GM Omar Minaya citing the "need to have some new ideas and some different thoughts on the organization" (New York Mets, 2011). This case demonstrates the justification typically given by owners of North American professional sport organizations when firing GMs. As ownership cannot fire the players, changes to the TMT are typically implemented when performance on the field of play fails to live up to the expectations of the organization. Through hiring a new GM, organizations are able to shift philosophies with respect to how they evaluate and select the human resources that drive performance.

Whether an organization chooses to change its player resource mix, coaching staff, or GM to improve performance, members of the TMT in professional sport teams are responsible for making these crucial decisions and implementing the actions that go along with them. In most organizational contexts across the four leagues included in this research, the GM is given full authority to make changes to the human resource mix. While exceptions exist where ownership makes these decisions (e.g., Jerry Jones of the NFL's Dallas Cowboys) and where the head coach has final say on player personnel decision making (e.g., Bill Belichick of the NFL's New England Patriots), the assumption adopted in this dissertation is that the GM drives these strategic choices in the four

leagues comprising the analyzed research context. Thus, gaining a better understanding of the qualities of these individuals that direct the decision making approach employed by the organization relative to player personnel will enhance our understanding of the drivers of performance for these organizations.

1.3 Introduction of Relevant Theory

In a recent review, Hambrick identified the focus of UET as "the logic that executives make choices on the basis of their personalized construals of the situations they face." (2007, p. 338). Restated, this idea asserts that executive managers interpret situations and execute decisions based upon their own unique experiences accumulated throughout their lives. As organizations are becoming increasingly complex in terms of the diversity and composition of management personnel responsible for developing and executing macro-level courses of action such as product innovation, acquisition, or diversification, an investigation into the relationship between micro and macro factors and the extent to which they shape performance outcomes is important. By examining the individual characteristics of members of the TMT as they relate to decision making and organizational performance, insights into the manner by which individual interpretations of situational factors impact the decisions made by these employees can be gained. Investigating the interplay between individual strategic actions and organizational performance in professional sport organizations can potentially inform the broad management literature as to how the actions, decision, or interpretations of TMT members are shaped by both individual variables and institutional factors.

Institutional theory may offer some insight into this relationship, particularly in explaining some of the forces of influence that exist in these organizations that may enhance or reduce the extent to which GMs can impact organizational performance through player talent evaluation and selection. DiMaggio and Powell (1983) suggested that organizations operating in a common competitive environment become homogenous over time due to isomorphism. Building on this focus, Friedland and Alford (1991) defined institutional logics as those ideas and beliefs that drive the behaviors of individuals within the context of interpersonal relationships, organizations, and society at large. These core ideas form the basis of institutional theory and are applied in this research to examine some of the key contingencies that exist in the GM – HR decision making relationship.

1.4 Purpose

The focus of this research is to examine background and experiential data on GMs that shape their decision making with respect to player personnel decisions. In addition, I will gain a better understanding of intra organizational pressures affecting teams in a particular league. To examine these issues, I develop a model that examines the GM – HR decision making – organizational performance relationship applying both micro and macro factors affecting organizational outcomes using UET and institutional theory. As there is no published research in the sport management literature examining the impact of executive actions on subsequent organizational performance, this study aims to establish a foundation on examining organizational performance through the lens of GM decision making in the sport context.

At the broadest level, the purpose of this dissertation is to examine the GM – HR decision making – organizational performance relationship using UET and institutional theory. Specifically, this research aims to apply UET and institutional theory as mechanisms for linking GM strategic decision making and organizational performance. To investigate the forces driving TMT behaviors in this regard in determining organization performance in the professional sport context, I will address the following research questions:

RQ1: How do a GM's demographic characteristics influence organizational performance?

RQ2: To what extent do logics of action at the organizational level moderate the GM - HR decision making relationship in a given organizational field?

RQ3: Do GM attributes have a significant relationship with organizational performance?

1.5 Opportunities and Contributions

The paucity of research examining organizational performance is surprising for two main reasons. First, the teams and leagues comprising the North American professional sport context serve as both institutions and organizations with respect to their individual properties and relational positions amongst competitors and operating environments. As such, the organizations comprising each league can be analyzed individually or in the context of the entire industry they occupy in which other organizations, league governing bodies and player's unions exist. In addition, the organizations comprising this context are transparent in terms of the vast amounts of data that are available with respect to their human resource composition and performance,

both financial via player salaries, team revenues, or team values as well as via competitive data (e.g., performance outcomes). Due to the availability of performance data for individuals, organizations, and leagues as well as the prevalence of controlled environments and motivated participants in which hypotheses can be tested, the sport context provides a unique opportunity for research on organizations (Goff & Tollison, 1990; Wolfe, Weick, Usher, Terborg, Poppo, Murrell, Dukerich, Crown Core, Dickson, & Simmons Jourdan, 2005). It is anticipated that the findings presented here will serve to inform an audience including sport management and non-sport organization scholars as well as practitioners occupying ownership and top management team (TMT) roles in the sport context. Thus, this research aims to establish a foundation of research on professional sport organizations with a focus on the role of top management teams and their contributions to organization performance.

This research aims to primarily contribute to the sport management literature by examining the relationship between GMs and organizational performance by applying both UET and institutional theory as lenses for explaining performance variations in the sport context. I will investigate readily observable characteristics of GMs employed by professional sport teams as drivers of decision making activities and subsequent organizational performance. Concurrently, I will examine the extent to which selected institutional logics of action moderate the GM – HR decision making relationship. By examining GMs in terms of their individual backgrounds as well as the logics of action that shape their actions, this research intends to address potential endogeneity concerns by answering the question: what drives the strategic decision making of these individuals? Is it their unique skills and experiences or organizational pressures

emanating from the predominant institutions comprising the competitive environment? The end result of this research will be to serve as a foundation of research on upper echelons in the sport context. As UET research has evolved into a significant area of scholarship in non-sport organizational studies, the contributions of these employees to bottom line success (or failure) need to be quantified in the sport context.

Additionally, this study will help to develop the body of organizational research examining UET and institutional theory under the same umbrella. Institutional theory will be applied as a lens for examining potential moderators in the GM – HR decision making relationship. By utilizing the North American professional sport context to conduct this research, the extent to which institutional logics of action act as contingencies in a GM's ability to drive organizational performance can be examined. Additionally, this research aims to build on the minimal existing sport management research (Cousens & Slack 1996; 2005) that has looked at quantifying the role the TMT takes in directly impacting organizational performance. I intend for this research to set the stage for future work examining these facets of sport organizations.

In terms of practical contributions, this research aims to provide insight into several key management related issues. First, by examining the relational and demographic backgrounds of GMs in this context, patterns of successes and failures will be uncovered based upon these micro-level traits. From the standpoint of ownership, this information can be utilized to improve their decision making process with respect to hiring decisions related to TMTs. Additionally, by examining the key logics of action that influence the broad approach employed by ownership and subsequently the manner in which GMs can execute decision making activities within these organizations, insights

will be gained into the interplay between GMs and other facets of their team and league environments. Thus, the findings of this study will provide valuable information for organizations across the North American professional sport context.

Chapter 2

Literature Review and Hypotheses Development

2.1 Upper Echelons Theory

In this section, I summarize the literature on upper echelons in organizations. Specifically, I will detail the foundational works on the theory that have formed the bases for subsequent empirical research. Additionally, I will identify relevant empirical research that has contributed to our current understanding of upper echelons. Also, I will lay the foundation for the development of an integrated approach to applying both UET and institutional theory in the analyses of organizational performance in the sport context. Then, I will introduce the hypotheses to be tested in this dissertation. Finally, I will introduce my model for examining the GM – team player talent – organizational performance relationship that is the focus of this research.

2.1.1 Background

UET was founded on the premise that organizational outcomes are directly impacted by the knowledge, experiences and expertise of those individuals occupying prominent managerial roles in the organization (Hambrick & Mason, 1984). These authors introduced a model in which situations occurring in the context of organizational life are addressed by managers whereby strategic choices are made as a function of the

unique characteristics these individuals exhibit. As a result of the choices made by these individuals, organizational performance is argued to be directly impacted. To reconcile the impact that these "upper echelons" have on organizational performance, Hambrick and Mason (1984) argued that focus should be directed towards those data readily observable reflecting individual characteristics with respect to the educational, professional, and social backgrounds of prominent managers in organizational contexts. Thus, through the collection and analyses of these data, UET states that organizational outcomes can be predicted to some degree based upon the characteristics of executive managers. Due to the fact that the cognitions, values, and perceptions of TMT employees are difficult to measure, UET focuses on examining demography to suggest that managerial characteristics are reasonable proxies for underlying differences in cognitions, values, and perceptions (Carpenter, Geletkanycz, & Sanders, 2004). Thus, variables such as age, number of years and specific focus of work experience, and educational background can be applied to predict the actions of TMT employees when faced with strategic decisions in organizations.

To apply UET effectively to examine organizational performance, the issue of causality is an important consideration (Hambrick & Mason, 1984). First, those managers with significant professional experience within an organization or industrial context come to act in accordance with these previous experiences more so than on the basis of their individual attributes. Strategies employed in organizational life as a function of executive decision making are often a function of macro forces driving the pursuit of organizational goals. For example, an executive who is newly hired from an outside firm may bring a different perspective to the decision making process than an individual promoted from

within the organization to the position of manager. Thus, identifying the forces most directly driving the decision making process are important in UET research.

Similarly, the industrial context in which the organization is operating may directly impact the type of managers in positions of decision making authority. As this dissertation focuses on the North American professional sport context, many individuals occupying prominent management roles have a background that includes time spent performing as an athlete in their given league. As a result, differences in approaches or strategies with respect to strategy development and implementation may appear less frequently than in a context in which managers demonstrate more diverse backgrounds. As most GMs demonstrate at least a minimal level of playing experience in their given sport, it is anticipated that these experiences will push these individuals towards a more traditional approach to managing their organization. As an example, a GM may apply an approach to player talent evaluation that places the highest level of emphasis on individual outputs without consideration for how and to what extent these skills may interact with the abilities of other members of the team.

2.1.2 Extant research

Central to research applying UET is identifying which individuals comprise the TMT of the organizations being analyzed. Focus on the TMT as the primary unit of analysis in UET research has been directed at the relationship between the decisions and actions of TMT employees and the organization's operating environment (Hambrick, Finkelstein, & Mooney, 2005). While the TMT has been defined as executive managers who also serve on the board of directors (Finkelstein & Hambrick, 1990), most extant

UET applications define the TMT based on convenience (Carpenter et al. 2004). As demographic data on TMT employees typically are collected via public sources such as annual reports, most UET studies define the TMT as those individuals operating at the highest levels of management such as the Chief Executive Officer (CEO), Chief Operating Officer (COO), and Human Resources Director. Thus, the definition of the TMT in UET research is fluid from study to study as scholars have tended to utilize data on those executives identified in public information sources in developing and testing hypotheses.

UET has been applied to examine the relationship between TMT employees and subsequent information processing in the context of apparel, chemical, food, furniture, and industrial equipment companies (Marcel, 2009). Findings indicated that employing additional TMT members, a Chief Operating Officer (COO) in this case, can improve information sharing and coordination in a variety of organizational contexts.

Additionally, UET has been utilized in analyzing strategic human resource management (SHRM) practices as they contribute to an organization's competitive advantage amongst Taiwanese companies (Lin & Shih, 2008). Here, findings demonstrated a mediating role of TMT composition and the relationship between the SHRM system employed and the firm's performance. Specifically, the authors found that TMT composition can influence the effectiveness of SHRM practices on firm financial performance. These findings demonstrate a potential relationship in which the TMT can serve as a moderator in the strategy – performance relationship.

UET has also been applied to examine the relationship between CEO tenure, industry composition, and organizational performance (Henderson, Miller, & Hambrick,

2006). This study focused on both stable (food industry) and dynamic (computer industry) operating environments in analyzing the effects of CEO tenure on firm performance over a 36 year compilation of data. These industries were categorized as such based upon the degree to which innovations in technology and strategic approaches impacted performance over time. Results indicated that CEO performance peaked at the onset of their tenures and steadily worsened over time in the computer industry while those CEOs working in a more stable industry demonstrated an inverted U-shaped relationship where their performance peaked after approximately 11 years. Another study examining performance as a dependent variable applying UET analyzed variations in financial performance amongst family-run industrial organizations in Italy (Minichilli, Corbetta, & MacMillan, 2010). This study applied UET as a theoretical foundation in the examination of both the CEO and TMT of the top 500 industrial Italian family-owned firms to investigate both positive and negative effects of nepotism with respect to organizational performance. Results indicated that firms with a CEO who is a member of the ownership family demonstrated higher levels of financial performance. In addition, TMTs comprised of both family and non-family members are more likely to engage in conflict. Thus, organizations need to be cognizant of the nature of the industry in which they compete (stable vs. dynamic) and the extent to which CEO tenure can be impacted by changes in the operating environment. Also, composition of the TMT can act as an important determinant of performance in organizations, depending on the industry context and mix of these employees.

In addition, UET has been used to analyze the relationship between the work experience of the organization's founder and the organization's performance as

moderated by the focus of the firm's strategic business model by investigating a sample of German biotechnology firms (Patzelt, Knyphausen, & Nikol, 2008). Findings indicated that the experience – performance relationship is moderated to some degree by the type of business model employed by German biotech firms. In particular, a link between the specific work experience and technical expertise of the organization's founder and the likelihood of success of the business model utilized by the organization was established. These findings point to the need for a TMT to be comprised of those individuals who demonstrate the requisite levels of experience and relevant skills to design and implement a business model that will enable the organization to achieve its performance objectives.

The relationship between TMT tenure and organizational outcomes other than performance including strategic persistence and conformity to competing firms in the computer, chemical, and natural gas distribution industries has also been examined (Finkelstein & Hambrick, 1990). This research also investigated the role of managerial discretion as a moderating variable in the TMT – organizational outcome relationship as specified by UET. Managerial discretion refers to the autonomy of actions available to top executives and serves as a means of accounting for different levels of constraint facing TMT employees (Hambrick & Finkelstein, 1987). High managerial discretion refers to a situation where TMT where managers can significantly impact the organization through their actions. As a result, the characteristics of these employees are expected to be reflected in organizational outcomes in situations where discretion is high. Results indicated broad support for UET as TMT tenure was found to strongly influence organizational outcomes related to persistence and conformity. Also, the extent to which

TMT members were granted high discretion in the pursuit of these strategies impacted the strength of the relationship between tenure and outcomes.

Related research examined the intra and extra industry interpersonal relationships of TMT members with respect to how they shape strategic focus and organizational performance in the branded foods and computer industries (Geletkanycz & Hambrick, 1997). The ideas examined in this study were centered on investigating the role that external ties play in shaping the strategic choices TMT members pursue as decision makers in organizations. Here, external ties refer to relationships between senior executives and members of external corporate boards. Findings indicated that the external ties of TMT members directly contribute to the type of action taken by the organization. External ties to outside organizations shape the strategies recommended and implemented by those employees charged with executing high level strategic initiatives. Further, in uncertain operating environments, conforming to strategies employed by competitors improved organizational performance. Thus, depending on the context in which the organization is competing, the external ties of TMT members can be used to improve the strategic direction and performance of the organization.

In applying UET, some studies have focused on the relationship between TMT demographics and strategic choices in organizations. For example, one study focused on examining the relationship between TMT characteristics and innovation adoptions amongst a sample of 460 state chartered and national banks located in the Midwestern United States (Bantel & Jackson, 1989). Findings indicated that banks managed by more educated TMTs who came from diverse functional backgrounds were more likely to adopt innovative products, programs or services.

Similarly, another study focused on the relationship between TMT characteristics and the adoption of IT technologies amongst small businesses in the United States (Chuang, Nakatani, & Zhou, 2009). This research focused on the extent to which IT adoption can be measured as a function of TMT characteristics. Findings indicated that age, educational background and group heterogeneity could be used to explain rates of IT adoption amongst the small businesses included in the sample. Thus, a link between TMT characteristics and strategic choices related to technology adoption was supported by this study. These studies (Bantel & Jackson, 1989; Chuang et al., 2009) warrant inclusion in this literature review because they do not focus on organizational performance as the dependent variable. In both cases, demographic data were analyzed in an attempt to predict strategic choices related to innovation as a function of TMT composition.

Other studies applying UET have considered both TMT and CEO characteristics and organizational performance as they relate to the adoption of strategic change initiatives amongst a sample of organizations producing semiconductors (Boeker, 1997a). Here, organizational performance, TMT, and CEO characteristics were measured as independent variables in examining their effects on strategic change adoption. The main finding of this research indicated an interactive relationship between management characteristics and performance in affecting strategic change acceptance. A related study examined the impact of TMT employee movement amongst organizations competing in the semiconductor industry with respect to new product market entry (Boeker, 1997b). Findings indicated that TMT members bring past experiences and exposures to different technologies with them as they migrate between organizations. As a result, entry into a new product market is directly impacted by these previous experiences. Additionally,

previous work experience was found to impact the extent to which these TMT members initiate new product market entry once hired by their new organization.

Another study examined TMT heterogeneity with respect to diversity of perspective amongst members and its effects on organizational action including the magnitude and speed with which actions were undertaken as well as the organization's tendency to engage in responses to competitor's actions amongst a sample of 32 U.S. airlines (Hambrick, Cho, & Chen, 1996). These competitive behaviors were assessed as they related to organizational performance in this context with findings indicating a positive relationship between TMT heterogeneity and competitive actions with heterogeneous TMTs more likely to engage in bolder, more aggressive competitive actions. However, homogenous teams were found to execute these strategic behaviors more efficiently than heterogeneous TMTs. With respect to impacting organizational performance, findings indicated that heterogeneous TMTs were positively associated with both market share gains and increasing profits. Thus, this research provided support for the idea that heterogeneous teams are more creative while homogeneous teams are more efficient decision makers in organizational contexts.

2.1.3 Key issues

In reviewing the literature applying UET in the study of organizations, two issues appear to create consistent challenges for scholars examining the role of upper echelons in determining organizational performance. First, determining whether to focus the research on a single individual such as the CEO or on a group of managers such as the TMT is an important decision in applying UET. In addressing this concern, both the

context in which the organization conducts business and the decision making processes undertaken in addressing strategic concerns are key considerations in choosing the appropriate focus. In organizations where collaborative decision making is practiced as a standard approach to addressing key strategic issues, a focus on the TMT would seem appropriate when analyzing the impact of demographics on performance. Conversely, in settings where a single individual is granted and exercises full authority to put decisions into action, focus on this individual alone may be sufficient when applying UET. For the purposes of this dissertation, I focus exclusively on the strategic choice of human resource acquisitions related to team player talent. As I assume that the GM is typically the ultimate decision maker for this strategic choice, I focus on GMs as drivers of performance in this regard.

Another challenge for UET research is dealing with level of analysis issues that are inherent while studying complex, multi-leveled organizations. As work applying UET examines either individual or TMT attributes as drivers of performance or other outcomes at the organizational level, analyses must recognize and properly account for these data. Since most organizations exist as hierarchically structured systems, it is often difficult in practice to identify and isolate single-level relations that operate independent of other levels (Klein & Kozlowski, 2000). This is evident in the North American professional sport context in which players, coaches, and TMT employees all function interdependently in the pursuit of organization success. As an outcome, organizational performance is argued to be directly linked to the decisions made and executed by TMT employees. The proposed multilevel model introduced in the next chapter of this dissertation aims to address level of analysis concerns directly by linking micro

demographic attributes with macro-level organization performance via a bottom-up process between individual TMT characteristics and organization performance. Thus, the experiences, values, and biases of TMT employees are argued to have emergent properties through the decision making processes utilized to generate and execute strategic organizational actions necessary for performance.

2.2 Institutional Theory

In this section, I justify the use of institutional theory as an appropriate theoretical lens for examining the GM – HR decision making relationship in the sport context.

Additionally, I detail the foundational works on the theory that have formed the bases for subsequent empirical research. Also, I introduce and discuss relevant research from the sport management literature applying the theory. Finally, I establish a foundation for hypotheses development where individual logics of action serve as contingencies in the extent to which a GM can influence performance through their decision making related to player talent.

2.2.1 Justification

As organizations are faced with intense competition and uncertain operating environments, investigating the factors that impact performance has become a prominent area of research focus amongst scholars examining organizations. From a practical standpoint, gaining a better understanding of the variables driving performance may enhance the effectiveness with which executives manage the strategic activities associated with competing in dynamic environments. As performance is driven by the

abilities of individuals within an organization to prioritize initiatives, organize resources and pursue goals relative to achieving some outcome, measured typically in output or dollars, understanding what differentiates these individuals and how organizational and institutional pressures can impact the decision making processes employed by them has potentially far reaching implications.

With organizations demonstrating increasing complexity in terms of the diversity and composition of management personnel responsible for developing and executing macro-level courses of action, the notion that both macro and micro factors shape performance outcomes has plenty of intuitive appeal. Throughout the history of research applying organization-focused theories, several approaches have been utilized with varying conceptions of what constitutes an organization and how organizations interact with their competitive environments. Structural contingency theorists argue that the relationship between an organization's environmental uncertainties, structural differentiation, and coordinating activities directly determine the performance and ultimately, the survival prospects of an organization (Lawrence & Lorsch, 1967). Studies applying this theory typically examine singular organizations as the unit of analysis and focus on the relationships between an organization's structure, its operating environment and subsequent performance. Transaction cost economists claim that the boundaries and structure of a firm are variable, and are chosen based on an analysis of costs associated with the firm's transactions (Williamson, 1975). Here, the unit of analysis is typically a transaction, defined as the transfer of a good or service across some technologically separable interface (Williamson, 1981). Population ecology theorists argue that in order to fully understand the nature of a population, it is necessary to study the entire body of

organizations which were born in a given context (Hannan & Freeman, 1977, 1984). In particular, they focus on analyzing organizational births and deaths of those firms demonstrating the same form. The primary unit of analysis applied by population ecologists is typically the entire organizational population of a particular industry. Resource dependency theorists examine the organization as a coalition of groups and interests with specific ideas and objectives, each of which are attempting to obtain something from their membership (Pfeffer & Salancik, 1978). Studies applying this theory typically examine individual organizations as the unit of analysis while examining interdependencies and power dynamics.

Neo-institutional theorists differentiate themselves from the aforementioned organizational theories in that they examine organizational fields rather than individual organizations or entire organizational populations as the primary unit of analysis.

DiMaggio and Powell (1983) defined an organizational field as a group of organizations that combine to form a recognized area of institutional life such as suppliers, consumers, regulatory agencies, and other organizations that produce similar services or products.

While each of the aforementioned theories focus on macro phenomena, only one is appropriate for analyzing a group of similar organizations operating under the constraints of a given industry. For research that examines components of a particular field as the unit of analysis, the application of institutional theory is appropriate.

2.2.2 Focus

In addition to applying UET to examine the mechanisms impacting the GM – performance relationship, I will examine the extent to which these managers are impacted

by logics of action exerted by individuals comprising the field in which they operate by applying institutional theory. To set the stage for the introduction of my multilevel model, this discussion will serve to highlight and summarize relevant literature on institutional theory. By identifying relevant work applying institutional theory, I will establish a foundation for my assertion that institutional logics of action serve to moderate the GM – HR decision making relationship with respect to personnel decisions. Central to this research, I suggest that logics of action impact the degree to which GMs operating within the North American professional sport context can impact performance through their decision making. Specifically, I will examine if and to what extent individual logics of action at the team (ownership) level within this context influence the actions of GM representing the organizations populating the field. By complementing my analysis applying UET with an institutional theory perspective, I aim to address recent concerns expressed on the direction of institutional theory research.

Suddaby (2010) recommended a redirected focus in which studies focus on the organizational level of analysis to understand how institutions are comprehended and interpreted by organizations themselves. This dissertation will focus on how specific logics of action emanating from ownership and the head coach moderate the ability of individual GMs to develop and execute HR strategies related to player hiring and firing. Davis and Marquis (2005) suggested that organizational research utilizing an entire field of organizations rather than a singular organization as the unit of analysis serves as potentially the most fruitful for further developing the literature on institutional theory. By applying mechanism-based theorizing with a focus on explaining rather than predicting organizational phenomena, the authors argue that we can gain a clearer

understanding of the drivers of action during the constantly changing operating environments organization's occupy in today's economy. By testing hypotheses related to specific demographic attributes, institutional logics of action, and their impact on organizational performance, I aim to explain these relationships through this analysis. Considering this research with respect to the goals of mechanism-based theorizing leads to a focus on explaining what relationship exists between GMs and performance by examining the extent to which their individual attributes and predominant logics of action influence their decision making and subsequent performance on the field of play. Focusing on the institutional logics of action moderating the GM decision making process along with UET will enable these relationships to be expounded upon.

2.2.3 Foundations

Institutional theory attends to the manner in which environmental variables such as rules, norms, and beliefs gain traction as standards for social behavior while impacting the structural orientation of organizations (DiMaggio & Powell, 1983; Selznick, 1996). This theory is typically applied as a mechanism for explaining organizational stability and similarity amongst organizational fields (Greenwood & Hinings, 1996). DiMaggio and Powell (1983) first defined an organizational field as a group of organizations that combine to form a recognized area of institutional life such as suppliers, consumers, regulatory agencies, or other organizations that produce similar services or products.

Modern institutional theory can be traced to seminal works by Meyer and Rowan (1977) and DiMaggio and Powell (1983). Ideas taken from each of these works have formed the basis for what is known to scholars as "new" institutional theory. At the core

of this theory is the idea that the formal structures of many organizations in postindustrial society dramatically reflected the myths of their institutional environments instead of the demands of their work activities (Meyer & Rowan, 1977). In other words, they proposed that organizations are structured to align with competitors rather than to maximize performance efficiency. These authors went on to introduce three specific processes that generate the aforementioned rationalized myths of organizational structure. First, they suggested that the elaboration of complex relational networks drive structure formation amongst organizations. This idea is centered on the premise that network relationships amongst different organizations, suppliers, and consumers actually dictate and shape the type of structures employed by these firms. Next, they posited that the degree of collective organization of the operating environment would influence structural orientation. Here, they reasoned that the extent to which the operating environment required collaboration amongst competing organizations would directly impact the types of structures utilized. Finally, they proposed that individuals occupying leadership roles within organizations were mostly members of the same social class and as a result, implemented similar ideas with respect to the structural orientation of the firm. The authors contended that these three potentially strong forces can influence organizations towards the development and implementation of myth-based structures. As such, they argued that the impact of these elements on organizations and organizing is significant.

Thus, organizations are structured by phenomena in their environments and tend to become isomorphic with them through which they structurally reflect socially constructed realities. Three main consequences of this process were introduced by Meyer and Rowan (1977). First, isomorphism causes organizations to incorporate elements

which are legitimated externally, rather than in terms of efficiency. Also, as a result of isomorphic pressures, organizations often employ external or ceremonial assessment criteria to define the value of structural elements. In addition, dependence on externally fixed institutions often times reduces turbulence and maintains stability.

DiMaggio and Powell (1983) suggested that organizations operating in a field become homogeneous over time due to isomorphism. Hawley (1968) defined isomorphism as a constraining process that forces one unit in a population to resemble other units that face the same set of environmental conditions. Thus, it was argued that organizations competing in a singular field are pushed towards structural similarity via isomorphic pressures.

DiMaggio and Powell examined how isomorphism as a process potentially impacts organizational actions and why these pressures may directly impact organizations competing in the same environment. They argued that structural change in organizations competing in the same field is less driven by competition or efficiency improvement concerns than by organizational change agents that push conformity and similarity to other firms operating in the organizational field. They introduced three mechanisms through which institutional isomorphic change occurs including coercive, mimetic, and normative pressures.

Coercive isomorphism refers to pressures exerted by those organizations on which an organization depends to engage in questionable behaviors. An example of coercive isomorphism in the sport context could occur where a relatively weak organization in terms of financial position depends on revenue sharing driven by larger, more profitable organizations in their league. As a result of this financial dependence, they are forced into

engaging in activities that may unfairly benefit the more prominent organizations in the league. For example, a small market team in MLB may trade an established, star-quality player to a larger-market team based upon the assumption that they will not be able to make the player a competitive contract offer during future negotiations. As a result, they trade the player to a team with more financial resources in exchange for prospects who have not yet established themselves as viable players in the league.

Mimetic isomorphism refers to pressures exerted by uncertainty in which an organization will model itself after other organizations for lack of a better strategy or because that strategy has led to some measure of success for a competitor. In the sport context, mimetic isomorphism occurs frequently where organizations copy the policies or strategies of those organizations in their league who have achieved desirable levels of success. An example of mimetic isomorphism in the sport context can be seen where competitors adopt a "Moneyball" approach to selecting and acquiring player talent as popularized by GM Billy Beane of MLB's Oakland Athletics. This player evaluation system utilizes non-traditional statistical outputs as a proxy for measuring and prioritizing player acquisitions. The idea is that statistics that have been historically undervalued on the free agent market are actually very useful in predicting a player's impact on team performance. Thus, players can be acquired via the draft and on the open market in a more economical manner. The Oakland A's used this system of player evaluation to great success. During the period of 2002 through 2005, they won 58% of their games which put them in the top 8 percent of MLB while maintaining a payroll that ranked 22nd of 30 teams (Wolfe, Wright, & Smart, 2006). As a result of the success of the Moneyball approach, GMs such as Theo Epstein in MLB and Daryl Morey in the NBA have adopted

similar approaches in which analytics are used to evaluate and differentiate player talent. For example, Daryl Morey of thhe NBA's Houston Rockets has adopted a quantitative approach to measuring player contributions to team performance utilizing his non-sport background as a consultant and his MBA from M.I.T. (Daryl Morey, 2008). This approach is focused on applying statistical analyses in examining individual outputs of players and using these data to guide HR decision making with respect to evaluating and selecting team player talent.

Normative isomorphism occurs when pressures are exerted by other organizations to adopt and implement occupation-specific rules and regulations. In environments where a certain action is considered by the majority of organizations to be the correct course of action, normative pressures may push previously non-conforming firms to act in accordance through feelings of moral obligation to do what is deemed proper by most. An example here can be seen where a large, dominant group of organizations exude pressure on a single or small group of organizations into accepting a new set of rules such as a revised collective bargaining agreement in which important operational and financial guidelines are established. In this example, those firms pressuring other organizations towards compliance might justify their actions by saying that it is the right thing to do in order to benefit the league as a whole. A recent example of this can be seen in NFL labor negotiations that resulted in the ratification of a new CBA in 2011. During these negotiations, Jerry Jones, owner of the Dallas Cowboys, made comments to the media indicating that he and other high profile owners (representing a minority) did not support revenue sharing in the league (Jerry Jones, 2012). However, the league and NFLPA eventually came to an agreement that included a provision for revenue sharing thus, appeasing the majority of owners in the league. Isomorphic pressures such as those related to establishing financial regulations in the NFL are suggested to be shaped by those characteristics that are most prevalent in the environment which are deemed as proper given the operating context of the competing organizations. As such, it stands to reason that compatibility with forces in the environment determines the extent to which isomorphism influences the actions of the organization.

Following DiMaggio and Powell's work introducing the role of isomorphism in dictating the structural orientation of organizations, a new focus within institutional theory research emerged in which the logics defining the meaning and content of institutions were brought to focus. Friedland and Alford (1991) defined institutional logics as those ideas and beliefs that drive the behaviors of individuals within the context of interpersonal relationships, organizations, and society as a whole. With respect to organizations, logics serve as the bases for structures, actions, and individual behaviors in a given institutional environment (Thornton & Ocasio, 1999). At the individual level, logics of action serve as precursors to subsequent institutional logics (Thornton & Ocasio, 2008).

To further articulate how logics of action can be used to frame the moderation relationships in this dissertation, I draw from a prominent area of focus within the institutional theory literature related to the ideas of control and power. These ideas are argued to be directly related to the GM – HR decision making – organizational performance relationship and the extent to which ownership and the head coach can moderate this relationship. Fligstein's work (1987, 1990) examined competing

conceptions of control related to corporate governance. In this context, Fligstein found that intra-organizational power struggles and field-level struggle shape logics of action (Fligstein, 1987). Applying this to the present research, it can be theorized that the logics of action guiding the behaviors of ownership will undoubtedly impact the behaviors and relative effectiveness of the GM in the future. Additionally, field-level struggles existing as inter-organizational competition will also directly influence the logics of action guiding the ownership of individual teams. Individual executives are the primary carriers of the contending conceptions of control (Fligstein, 1990). Thus, an owner who practices a certain type of ownership control may carry one logic of action while a GM may carry a different logic of action and so on. The tension created by varying logics of action is argued to moderate the GM – team player talent relationship.

The body of research examining the role of institutional logics in dictating the actions of organizations primarily examines the mechanisms by which individuals or collectives are influenced by the beliefs, rules, and norms acting as the predominant logics driving decision making in organizational fields (Thornton, 2002). One strain of this research focuses on the examination of the role of logics in shaping the relationship between the organization and its employees with respect to the adoption of or resistance to change. Marquis and Lounsbury (2007) investigated how competing logics at the industry and individual employee level in the U.S. community banking industry interact to facilitate resistance to institutional change. Specifically, this study examined how opposing logics related to banking acquisitions influenced the local founding rate of banks in the United States. The basic idea that logics can shape decision making and the behaviors of an organization's employees in a field can be applied to the present research.

Here, the actions of TMT employees are argued to be impacted by both the frequency and intensity of predominant logics of action related to human resource decision making in the sport context. For the purposes of this dissertation, logics of action are expected to play a role in dictating the actions of the TMT employees analyzed. This connection will be introduced and explained in greater detail in the following chapter.

It is anticipated that logics of action play an integral role in moderating the decision making processes of the GMs analyzed in this dissertation. As suggested by Oliver (1991), organizations are unlikely to resist institutional pressures when they emanate from key entities occupying prominent positions within its field. This means that smaller, less powerful organizations are likely to succumb to pressures exerted by dominant organizations or governing bodies in a given field. To account for this, I will assess institutional logics of action via two moderating variables related to each individual organization included in the four North American professional sport leagues. Through this assessment as well as the examination of the GM using an UET lens, I expect to paint a colorful and complete picture of the extent to which both individual background characteristics and logics of action dictate individual decision making. By examining this phenomenon applying both perspectives, I aim to reconcile the extent to which GM decision making impacts organizational performance.

2.3 Relevant Sport Management Research

Due to the lack of research applying UET in sport management research to examine TMTs, only one study examining GMs in the professional sport context currently exists (Wong & Deubert, 2010). This research does examine experiential

variables as well as demographic data to summarize the GM population in MLB from 1989 until 2009. The authors concluded that the necessity for playing or coaching experience declined while the educational backgrounds of the GM sample increased over the 20-year period comprising the analyses. However, this paper is primarily exploratory in nature and does not link individual GM attributes to subsequent organizational performance. Thus, as the sport management literature lacks any empirical research examining the link between TMT employees of professional sport organizations and performance, it is anticipated that the present research will serve as a foundation to inspire further investigations examining TMT employees and their contributions to organizational performance via the application of UET.

Institutional theory has been utilized frequently as a theoretical basis for sport management research. Upon a review of this literature, two variations of the same basic focus in applying this theory in the sport context are evident. The most common approach employed by much of this research has focused on applying an institutional theory lens in examining the impact of logics, isomorphism, and diffusion in shaping organizational actions in changing operating environments (e.g. O'Brien & Slack, 2004; Silk & Amis, 2000; Washington & Ventresca, 2008). Another alteration of this approach has shifted the focus of the institutional theory perspective to examine how individual organizations can serve as change agents in institutional fields. Specifically, this line of research looks at how individual organizations can impact each other through their actions independent of institutional pressures that may exist (Kikulis, 2000). For the purposes of this dissertation, I will discuss four studies from this literature to emphasize the focus of these works as well as the opportunity I seek to address with the present research.

Kikulis (2000) presented an institutional theory-centered argument for assessing change in Canadian national sport organizations (NSOs). Specifically, the author focused on how the organizations comprising the analyzed institutional environment changed the organizational structures and decision making approaches employed by firms in the field rather than focusing on the environment as the driver of organizational change in these areas. This research suggests that along with the operating environment, consideration of the stage and level of institutionalization at which the organizations being analyzed reside at a given point in time is critical in the examination of evolving institutions.

Another more recent study applied institutional theory to examine institutional changes in U.S. collegiate basketball (Washington & Ventresca, 2008). Here, the authors examined the interplay between isomorphism, diffusion, and institutional logics in shaping the evolution of an organizational field. Through this analysis, the authors suggest that examining the institutional strategies employed during the founding period of an organizational field may provide insight into issues plaguing the same field at time periods later in its development. The authors explored how institutional conflicts served as the precursor to change amongst organizations comprising a field.

The impact of institutional pressures in shaping the individual decision making tendencies of management personnel while determining appropriate courses of action in reproducing and televising a major sporting event in Canada was examined by Silk and Amis (2000). The authors endeavored to reconcile the interplay between macro institutional pressures and micro behaviors in making and executing strategic decisions tied to the organization. Findings indicated that individual ideas and behaviors played a role in the selection and execution of the production process utilized, but industry norms

and isomorphic pressures imposed by prominent institutions in the field were ultimately more influential with respect to dictating the process employed. Thus, this research suggests that while micro factors play a role in influencing courses of action pursued at the organizational level, environmental and institutional factors are more likely the driving force behind strategic decision making undertaken by key management personnel.

O'Brien and Slack (2004) examined the organizational field of English rugby union to investigate the transition from an amateur to professional dominant logic between 1995 and 2000. In this research, an exogenous shock in the form of a policy change opened up a historically amateur sport to professional sanctioning. The authors found that institutional logics, isomorphic pressures and diffusion processes all played a role in shaping the actions of those organizations comprising the field during this period of transition. Immediately following the policy change, environmental uncertainty ensued. Soon thereafter, competitive and isomorphic pressures began to influence strategic decision making activities amongst impacted rugby clubs. Next, restructuring and coalition pressures exerted by other organizations in the field drove teams to action with respect to television contract negotiations and player acquisition expenditures. Finally, the league introduced a set of financial regulations intended to legitimate the organizational field and increase its attractiveness to potential investors. This research demonstrated how institutional logics and pressures interact to impact the strategic actions of organizations comprising a field during a period of policy change.

2.4 Hypotheses Development

To test relationships between the demographic variables of GMs, institutional logics of action and organizational performance in the sport context utilized in this dissertation, previous UET and institutional theory research was used as a building block for the variables and relationships expounded in this section. Thus, the findings of previously analyzed relationships in non-sport organizational contexts serve as the foundation for the present research. By drawing parallels between relationships studied in non-sport organizations and the aims of the present research, my goal is to develop and test a conceptual model using data collected on a sample of GMs from each of the four major North American professional sport leagues. The principal aim of this section is to introduce and justify the hypotheses that will be tested via the model introduced in the section that follows.

2.4.1 GM characteristics

The GM – HR decision making – organizational performance relationship serves as the foundation for the hypotheses developed in this section. I propose that the individual attributes (including both demographic and experiential) of the GMs analyzed directly impact the expertise of these individuals with respect to the manner in which they identify, evaluate and attain the athletes who comprise their teams. The manner in which individual athletes are selected and integrated with respect to the team's pursuit of objectives is argued to be determined by the GMs who develop strategies and execute decisions to shape organizational performance.

This dissertation will focus on four constructs as the key determinants of a GM's ability to effect organizational performance via HR decision making: tenure, functional experience, technical experience and age. Each construct is adapted from the extant UET literature and will be briefly described in terms of the GM's identification and acquisition of player talent. These descriptions are intended to provide justification for their inclusion in the model.

2.4.2 GM tenure

In the team sport context utilized in this research, I analyze the TMT through the GM assigned direct responsibility for hiring, firing, and managing athletes and coaches. With respect to decision making, I argue that GMs in this context will be more or less likely to react depending on the diversity of their individual backgrounds. Here, I adopt Henderson et al's (2006) fixed paradigm conceptualization of CEOs. As with CEOs in the food and computer industries, I expect that GMs in the professional sport context have a set of beliefs and views on their league that are interconnected with their abilities related to evaluating player and coach talent. Although GMs may be able to adapt under certain environmental conditions in which change is necessary, I argue that cases where GMs alter their approach dramatically are rare (Henderson et al., 2006). For example, a GM who has spent several years working for an organization willing to spend liberally on acquiring and retaining top-name player and coach talent is expected to have a difficult time succeeding should they move to a different organization where financial constraints limit the resources available for human resource acquisitions. Applying Staw and Ross (1987), I propose that in organizations with longer-tenured GM, they will become more

committed to their philosophy and approach with respect to evaluating and selecting team player talent as time goes by. As such, I propose that their response to their environment will be slower than in those organizations with shorter-tenured GMs. For example, if a trend is emerging in a league with respect to the types of skills or attributes that successful organizations are valuing when evaluating new player acquisitions, teams run by individuals with who are longer-tenured as GM may be slower to respond to such trends and as a result, performance may suffer.

By extending this thinking to consider the effect of TMT succession on subsequent organizational performance, I argue that GM tenure will have an impact on the team's performance. Hambrick and Fukutomi (1991) found that longer-tenured CEOs become increasingly isolated from the external environment and as a result, are expected to reach a point where their performance begins to suffer. As GM tenure increases, it is expected that like-minded employees who support the practices and approach utilized by the GM will be retained. As time goes by, the organization's TMT will likely consist of a higher percentage of executives who support the practices of the GM (Hambrick, 1995). As a result, performance will ultimately begin to lag.

Hypothesis 1: GM tenure and organizational performance will demonstrate an inverted U-shaped relationship in all four leagues.

Hypothesis 1a: GM tenure and organizational performance will demonstrate an inverted U-shaped relationship in MLB.

Hypothesis 1b: GM tenure and organizational performance will demonstrate an inverted U-shaped relationship in the NBA.

Hypothesis 1c: GM tenure and organizational performance will demonstrate an inverted U-shaped relationship in the NFL.

Hypothesis 1d: GM tenure and organizational performance will demonstrate an inverted U-shaped relationship in the NHL.

2.4.3 GM functional experience

Tushman and Rosenkopf (1996) investigated a similar relationship in their research examining the American cement industry from 1918 to 1986. Here, the authors examined the extent to which organizational performance was impacted by executive succession, executive team change, and subsequent strategic reorientation. Results indicated that changes in both CEO and TMT composition can have positive relationships with organizational performance. Related, Boeker (1997b) found that the migration of executives across organizations competing in the same industry directly influences the types of strategic change enacted. He suggested that the unique skills and experiences of these migrating executives will directly shape the strategies they implement at their new organization. Building on this finding, I suggest that GMs who accumulate more experience in other front office organizational positions (other than GM) will be better equipped to identify opportunities and develop unique strategies for exploiting them once GM status is attained. Support for this idea can be drawn from Kor (2003) who found that TMT member functional experience levels may aid an organization in the pursuit of new strategies that can exploit opportunities in the industry. A specific example of this idea can be illustrated by a GM who is well-versed in the statistical analysis of players who may design a new strategy towards identifying and valuing potential athletes for

their team (e.g., Billy Beane of MLB's Oakland A's). Here, functional experience encompasses work-related skills and experiences. For a GM who served five years in a lesser managerial role prior to being promoted to GM, functional experience would include both the five years served previously as well as both current and previous GM tenure. Thus, functional experience is intended to account for all relevant work experience gained by the GMs analyzed. Whether or not this individual changes positions across organizations, it is argued that the unique functional experiences previously engaged in will impact their abilities to identify understand the organization, the league and the evaluation process of the players that comprise it. These abilities are expected to impact subsequent organizational performance.

Hypothesis 2: GM functional (front office) experience will be positively related to organizational performance in all four leagues.

Hypothesis 2a: GM functional (front office) experience will be positively related to organizational performance in MLB.

Hypothesis 2b: GM functional (front office) experience will be positively related to organizational performance in the NBA.

Hypothesis 2c: GM functional (front office) experience will be positively related to organizational performance in the NFL.

Hypothesis 2d: GM functional (front office) experience will be positively related to organizational performance in the NHL.

2.4.4 GM technical experience

Another popular stream of extant UET research has examined demographic variables related to TMT members and the relationship between these individual differences and an organization's propensity to innovate (Chuang et al., 2009; West & Anderson, 1996). These studies both found support for the idea that TMTs comprised of younger and more educated employees are more likely to adopt new strategies. Additionally, those TMTs comprised of employees claiming hands-on experience with respect to engaging in product innovations were more likely to promote cutting-edge strategies in subsequent organizational actions. Many GMs are former athletes themselves. Thus, it is anticipated that those GMs with professional playing experience were impacted to some degree by the strategies designed and implemented by the organizations that they played for. As a result, these GMs are expected to execute similar approaches as members of the TMT. Those GMs with technical experience, defined as the total number of years the individual competed as a professional athlete in the sport, are expected to be better prepared to design and execute new approaches to evaluating, hiring and firing player resources. As a result, those organizations run by GMs with higher levels of accumulated technical experience are expected to be more successful than those controlled by shorter-tenured counterparts due to the diversity of experiences encountered as a former athlete related to front office philosophies.

Hypothesis 3: GM technical (professional playing) experience will be positively related to organizational performance in all four leagues.

Hypothesis 3a: GM technical (professional playing) experience will be positively related to organizational performance in MLB.

Hypothesis 3b: GM technical (professional playing) experience will be positively related to organizational performance in the NBA.

Hypothesis 3c: GM technical (professional playing) experience will be positively related to organizational performance in the NFL.

Hypothesis 3d: GM technical (professional playing) experience will be positively related to organizational performance in the NHL.

2.4.5 GM age

Age may also be a factor in these relationships. I suggest that younger GMs are more likely to suggest inspired strategies than their older counterparts. The main reasons for this center on the notion that older TMT employees are likely to be more familiar with strategies they have been utilizing over the duration of their careers and thus, continue to apply them in the face of evolving industry conditions. Chuang et al. (2009) found support for this idea in their study of small organizations competing in the wholesale trading industry. Here, the age composition of TMT members was found to be negatively related to the likelihood of information technology adoptions focused on capital investment and innovation. As such, younger GMs are expected to be more open minded with respect to employing new strategies. However, it is expected that upon implementation, these changes will take time to gain traction. As a result, judgment on the success or failure of new approaches will take several years to complete. Thus, it is expected that GM age will demonstrate a positive relationship with organizational performance.

Hypothesis 4: GM age and organizational performance will demonstrate an inverted U-shaped relationship in all four leagues.

Hypothesis 4a: GM age and organizational performance will demonstrate an inverted U-shaped relationship in MLB.

Hypothesis 4b: GM age and organizational performance will demonstrate an inverted U-shaped relationship in the NBA.

Hypothesis 4c: GM age and organizational performance will demonstrate an inverted U-shaped relationship in the NFL.

Hypothesis 4d: GM age and organizational performance will demonstrate an inverted U-shaped relationship in the NHL.

2.4.6 Talent driving performance

Much of the existing empirical research applying UET has examined the extent to which the background characteristics related to TMT composition impacts outcomes such as propensity for action (Hambrick et al., 1996); innovation (Chuang, Nakatani, & Zhou, 2009); strategic change adoption (Boeker, 1997b); productivity (Keck, 1997); and performance (Henderson et al., 2006). Additionally, Papadakis and Barwise (2002) found that TMT and CEO characteristics both affect strategic decision making process, but CEOs and other members of TMTs affect different parts of the process. Thus, different members of the TMT can impact different strategic choices at the organizational level depending on their job role and the choice being executed.

The basic idea behind the focal relationship of this research is that those teams comprised of the most highly-skilled athletes will attain the highest level of performance

over an extended period of time. This assertion mirrors those used by organizational scholars who have examined drivers of performance in other, more traditional research contexts. For example, a computer software firm that competes on the basis of its ability to develop cutting-edge software technology is expected to achieve the highest levels of organizational performance when their employees demonstrate the most advanced and diverse skill set related to new technology development. Here, organizations employing more talented developers are anticipated to garner more market share than their competitors with less skilled developers. Thus, I argue that the composite skills and abilities of those employees most directly responsible for an organization's output are the principal drivers of performance. In subsequent sections in this chapter, I will further articulate this relationship in the North American professional sport context by introducing specific hypotheses.

The talent – performance relationship assumes that performance is measured by success or failure on the field of play. Performance is argued to be most directly impacted by the attributes and composition of the athletes comprising each organization. Thus, the competencies and skills of athletes on a team are directly linked to the performance outcomes achieved during competition. While statistics indicative of performance are readily available to GMs as tools for assessing individual athletes and forecasting their future impact on organizations, unconventional approaches to analyses serve as an opportunity for individual teams to develop competitive advantages based upon their GMs abilities.

Organizations in the four fields included in this dissertation are argued to be engaged in a continuous cycle performance improvement. The most common approach to

improvement typically focuses on changing the composition of player resources in hopes of enhancing the mix of abilities of the athletes comprising the team. By achieving a greater accumulation of athlete abilities with respect to on-field performance, improved team performance might be expected when compared to other teams operating at lower levels of cumulative athlete abilities. For example, a basketball team comprised of athletes demonstrating offensive proficiency as indicated by their ability to score points at a higher frequency than their competition may also lack defensive aptitude and consequently, allow its opposition to score a higher than average number of points in each game. Here, offensive talent enables the team to score a high frequency of points while a lack of defensive proficiency hinders the team's ability to stop opponents from scoring.

2.4.7 Mediation

Each of the previously introduced hypothesized direct relationships between GM tenure and organizational performance; GM functional experience and organizational performance; GM technical (professional playing) experience and organizational performance; and GM age and organizational performance are expected to be mediated by the team's composition of player talent. Based upon the constructs discussed above, the abilities of each GM to identify, evaluate and select player talent are expected to be dependent upon their tenure, functional and technical experience, and age. For each team – year observation included in the analysis, I argue that the composite abilities of the athletes comprising the roster for that season will drive the organization's performance, defined here as the team's winning percentage. Thus, GM experience and age will

determine the quality of player talent evaluation employed and the player talent comprising a team during a given season will determine the team's performance.

Hypothesis 5a: Team player talent mediates the relationship between GM tenure and organizational performance.

Hypothesis 5b: Team player talent mediates the relationship between GM technical (front office) experience and organizational performance.

Hypothesis 5c: Team player talent mediates the relationship between GM technical (professional playing) experience and organizational performance.

Hypothesis 5d: Team player talent mediates the relationship between GM age and organizational performance.

2.4.8 Institutional contingencies in the GM-HR decision making relationship

There are several potential moderators in the GM experience – HR decision making relationship that can be grounded in institutional theory. The extent to which the GM can directly impact the player talent composing their team is expected to be influenced by several organizational factors. In this section, I identify and define two factors, frame them using existing institutional theory research and introduce additional hypotheses to explicate their impact on the analyzed relationship.

Keck (1997) suggested that the relationship between TMT composition and organizational productivity is expected to be moderated by the degree of turbulence present in the industrial context in which the company operates. Thus, the degree to which uncertainties exist in the operating environment may significantly impact the

extent and direction by which the GM drives strategic choices. In the sport context, it is assumed that the operating environments of each league are subject to both organizational and institutional pressures and thus, change frequently. As such, I suggest that the extent to which GMs with diverse backgrounds and experiences may develop and execute unique approaches to evaluating and acquiring player talent will be impacted by ownership via team composition as well as the team's head coach.

2.4.9 Logics

As previously defined, logics of action serve as precursors to the formation of subsequent institutional logics (Thornton & Ocasio, 2008). These logics can take the form of ideas or beliefs that drive individual behaviors in the context of organizations (Friedland & Alford, 1991). In the GM – HR decision making – organizational performance relationship examined in this dissertation, the behaviors of individual team owners or ownership groups are expected to be impacted by their personal beliefs regarding the most effective way to evaluate and attain player talent. These beliefs may act in opposition to the individual beliefs of GMs who are also charged with executing these activities as part of their job title. As logics serve as the bases for actions and individual behaviors in organizational fields (Thornton & Ocasio, 1999), GMs may face opposition in organizations where existing logics do not align with their individual beliefs with respect to HR decision making. This conflict created by competing logics of action amongst ownership, GMs, and head coaches can serve to impact the extent to which a GM can do his or her job. At a broad level, the moderation hypotheses attempt to examine the extent to which the owner's logics of action align with the GM's logics of

action. Building on Fligstein's research (1987, 1990), Thornton & Ocasio (1999) focused on the link between power structures and institutional logics when looking at the publishing industry. They found that different organization-level logics are created by different power structures. Extending this to my research, I can frame each of the moderating variables identified in terms of logics of action based upon the predominant power structures that shape them in individual organizations and the leagues in which they compete. Under one logic of action, I argue that GM behaviors are shaped by their individual attributes and experiences and power structures are clearly delineated by the organization's structure. Here, each organization's formal structure allocates HR decision making authority to the GM and as a result, each GM's unique abilities and experiences directly determine their team's composition of player talent. Under this logic of action, the moderating variables (team composition (payroll) and head coach tenure) are expected to be least impactful in the GM – HR decision making relationship. Alternatively, I contend that where GM behaviors are strongly influenced by ownership or the head coach with respect to player talent acquisitions, power structures are more likely to have been shaped directly by ownership. That is, a GM may be granted formal authority symbolically via their title, but the owner may actually control the HR decision making process by limiting payroll or by granting player personnel decision making authority to the head coach. Under this logic of action, I expect the moderating variables to have a stronger bearing on the GM – HR decision making relationship.

An illustration of the manner in which ownership logics of action impact the GM's ability to impact the mix of team player talent via their experiences and background in a given organization is presented in Figure 2.

2.4.10 Head coach tenure

Head coach tenure is also expected to impact GM HR decision making in this context. Where a team's head coach is longer-tenured, I expect this individual to be more actively involved in player personnel decision making. As the head coach is responsible for the design, implementation and execution of strategies on the field of play, they are expected to actively voice their opinions in the HR decision making process. I expect that those coaches who are longer-tenured will have a more active role in this process and as a result, will have accumulated a roster of athletes demonstrating complementary skills to promote the successful execution of their competitive strategies. In organizations where this is the case, I suggest that GMs will have a harder time making an immediate impact on the player mix via their unique HR-related strategies. In organizations where coaches are shorter-tenured, I expect a GM to be able to demonstrate a more immediate impact through the design and implementation of their strategies. The construct of interest in this contingent relationship is identified as head coach tenure. As a measure for this construct, I will use the total number of years that the head coach has worked in this capacity for their current organization. As head coach tenure increases, the opportunity for a GM to impact the player mix of an organization in the short term is expected to decrease. Thus, head coach tenure is expected to moderate the GM – HR decision making relationship. Hypothesis 6a: Head coach tenure will moderate the relationship between GM tenure and team player talent.

Hypothesis 6b: Head coach tenure will moderate the relationship between GM functional (front office) experience and team player talent.

Hypothesis 6c: Head coach tenure will moderate the relationship between GM technical (professional playing) experience and team player talent.

Hypothesis 6d: Head coach tenure will moderate the relationship between GM age and team player talent.

2.4.11 Team composition

A team's composition of player resources is also expected to impact the GM HR decision making process for teams in the four leagues studied. For those teams with payroll constraints, I anticipate less GM flexibility with respect to altering the roster and as a result, a moderating effect to be present. Thus, the construct of interest in this contingent relationship is identified as team payroll. As a measure for this construct, I will use team payroll data for each team during the year of analysis. My expectation is that when team payroll is high, available financial resources will create a situation where the GM can impact the mix of team player talent via their unique experiences and background. Where financial resources are limited, the ability of the GM to drive the HR decision making process is anticipated to be impacted negatively. As a result, the strength of moderation is expected to be highest in organizations where the payroll is the highest. Thus, team payroll is expected to moderate the GM – HR decision making relationship. Hypothesis 7a: Team composition (payroll) will moderate the relationship between GM tenure and team player talent.

Hypothesis 7b: Team composition (payroll) will moderate the relationship between GM functional (front office) experience and team player talent.

Hypothesis 7c: Team composition (payroll) will moderate the relationship between GM technical (professional playing) experience and team player talent.

Hypothesis 7d: Team composition (payroll) will moderate the relationship between GM age and team player talent.

2.4.12 Introduction of Model

In this section, I introduce a model for understanding the relationship between GMs, HR decision making and organizational performance. First, I describe how I developed the research questions that are the focus of this research. Next, I describe Carpenter et al.'s UET model (2004). Lastly, I introduce and explain my model for understanding the impact of GM experience and demographics on HR decision making and subsequent organizational performance in the North American professional sport context.

2.5 Background

The research questions that this dissertation aims to address are focused on differences in team performance amongst each of the four North American professional sport leagues. As a consumer of the sporting events that each of these leagues produces and televises, my intent is to uncover the driving forces behind differences in organizational performance beyond the obvious focus of player talent and coaching expertise. As consumers of sport commonly attempt to reconcile differences in organizational performance, my focus on GMs as well as the manner in which the various

individual logics of action drive organizational action is intended to bring a new approach to analyzing these organizations.

The basic observation that this research intends to address is that teams in the four leagues to be analyzed differ in terms of performance on the field of play. As a result of performance differences, organizations in the four sport leagues analyzed differ in the level of success they achieve relative to wins and losses as well as financially in terms of revenue generation. Although both of these facts are quite obvious to even a casual fan of sport, my intention is to assess these differences using an approach that focuses on both upper echelons and institutional logics of action as they relate to the GMs who are serving as the key strategic decision makers in these organizations.

2.6 Model

The present research is focused on answering the following question: aside from focusing on differences in player talent and coaching proficiency, what is the most plausible alternative explanation for differences in team performance in this context? Rather than focus on those employees who are directly responsible for the output produced on the competitive field of play, I shift the analysis to those management personnel who are responsible for acquiring and firing player resources and making other resource allocation decisions with respect to payroll and team player talent. My contention is that focus should be shifted to the GMs who make these personnel decisions rather than the athletes and coaches themselves to provide new insights into how decisions are made and what traits or experiences are most important to these individuals in terms of predicting subsequent organizational success.

Carpenter et al.'s (2004) upper echelons perspective serves as the primary basis for the model I introduce in this research. Figure 3 shows a slightly adapted version of Carpenter et al. (2004) and is intended to illustrate how the characteristics of TMT employees may influence organizational performance. The model begins with a situation as created by the organization and operating environment in which the TMT employee being analyzed is employed. The basic tenet of the theory is that employees who occupy TMT positions are boundedly rational and thus, their demography can serve as a proxy for unobservable psychological characteristics such as perceptions, cognitions and values. As a result, UET suggests that differences in managerial characteristics can predict strategic choices and subsequently, organizational performance (Hambrick & Mason, 1984). Here, strategic choices such as innovation, diversification, or reorganization can be outcomes of both formal and informal choices as well as the competitive choices commonly referred to as strategy. The behaviors that these choices dictate are suggested to reflect the decision makers executing the related actions. Thus, organizational performance outcomes are argued to be impacted directly by the strategic choices enacted by TMT employees. UET argues that the values and perceptions of TMT employees are a direct result of the observable managerial characteristic of these employees. As such, analyzing these employees via their demography serves as an appropriate basis for predicting strategic choices and ultimately, organizational performance.

To further emphasize the proposed relationships as they apply in the sport context, I will provide an example using an organization in the NFL. Although this example could be described using any of the four leagues included in this research, I will elaborate on my model using the NFL context. As each organization is responsible for

fielding a team that will compete approximately once per week for the duration of a 17 week season plus playoffs, the players who perform as directed by their coaches serve as the most easily observable actors in this context. As such, those teams comprised of the most skilled athletes being directed by the most intelligent and experienced coaches are presumed to be at an advantage when compared to other organizations. The model I introduce below is based on the idea that when analyzing these organizations and controlling for differences in player talent resources, the drivers of performance are actually those individuals making HR personnel decisions rather than the athletes and coaches themselves. As in non-sport organizations, analyzing the employees most directly responsible for producing the outputs or services offered by the company is a plausible approach for investigating the drivers of performance. However, in non-sport industries, analyzing the individuals serving as the chief developers and drivers of strategic decisions and actions may be a more appropriate focus for uncovering the true determinants of performance. For example, when analyzing a Fortune 500 company operating in the pharmaceutical industry, a reasonable measure of organizational performance is annual product-generated revenue. If an analysis of this organization were to examine the principal drivers of performance, those employees directly responsible for developing and executing strategic decisions related to the organization's product-line would be an appropriate focal point. This focus is appropriate because these TMT employees evaluate alternatives available to the organization at the highest level and subsequently execute actions that drive performance. As such, I argue that a similar focus in the analysis of organizations in the sport context as defined in this dissertation is warranted.

Figure 4 incorporates both individual GM and logics of action as drivers and moderators of strategic choices related to player personnel amongst GMs in the professional sport context. This model illustrates several hypothesized relationships. First, direct relationships between GM experiences and organizational performance are examined. Next, the extent to which team player talent mediates the relationship between the GM and organizational performance is investigated. Finally, the extent to which logics of action related to payroll allocation and decision making authority of the head coach serve as contingencies in the GM – team player talent relationship are analyzed.

Chapter 3

Methodology and Data Collection

3.1 Introduction

In this chapter, I introduce and define each of the variables to be analyzed in this dissertation. Additionally, I describe the techniques that will be used to analyze these data while attempting to reconcile the impact that GMs have on organizational performance in the four leagues being analyzed including the NFL, NHL, NBA, and MLB.

3.2 Dependent Variable

Organizational performance has been analyzed as the dependent variable in several sport specific studies. Smart and Wolfe (2003) operationalized performance as team winning percentage defined as the ratio of a team's number of wins to the total number of games played during a given season. This research analyzed the impact of player and baseball manager abilities on individual team performance in MLB.

Independent variables were created to account for differences in player offensive and defensive resources as they were considered by the authors to be the two primary determinants of success in MLB. Team offensive resources were calculated to quantify the contribution of each individual player to their team's offensive output while team defensive resources were computed to account for individual player defensive abilities as

well as each pitcher's output relative to preventing opponents from scoring runs. Similarly, Montanari, Silvestri, & Gallo (2008) utilized professional Italian soccer as a research context while investigating the impact of player turnover on performance. They measured organizational performance as the total number of points accumulated during a season by each team in the league. Foster and Washington (2009) defined performance as game-by-game wins or losses while analyzing the effect of being the home team on performance in the NHL and MLB. Each of these studies assigned a variation of performance that can be quantified with readily available performance data.

For this dissertation, I define my dependent variable of organizational performance as a dollar of payroll spent for each win on the field-of-play. It should be noted that this relationship is not always constant. For example, if a team allocates \$200 million to payroll in a given season while a competitor only spends \$40 million, it's not likely that the higher spending team will win five times as many games. Despite this, my operationalization of organizational performance includes two components. First, a cumulative value was assigned to each team in each season included in the sample in which winning percentage, playoff appearances, playoff wins, championship appearances, and championship wins were combined to form a composite score for each organization in the four North American professional sport leagues. For each team year included in the sample, the number of wins was used to assign a value to each team. Additionally, for each team in the league that qualified for the playoffs during the year of analysis, a '1' was added while those teams who did not qualify received a '0.' Next, each playoff win was counted as a '1' toward the composite total. Finally, those teams who qualify for the league's championship game or series received a '1' with the

eventual champion receiving an additional '1.' For example, at the conclusion of the 2008-2009 NFL season, the Pittsburgh Steelers won the Super Bowl. During the regular season, they won 12 games so their number of wins was 12. Since they qualified for the playoffs, they received '+1' and they won 3 playoff games total so they received '+3.' They qualified for the Super Bowl so they received an additional '+1' and they eventually won the Super Bowl so they received a final '+5.' Thus, their composite score for the season was 18 (12 + 1 + 3 + 1 + 5). The equation used is as follows:

Composite score = # of wins in season + adder for postseason qualification (1 if yes) + # of postseason wins + adder for championship appearance(1 if yes) + adder for winning league championship (5 if yes)

A similar methodology was used for the NHL, NBA, and MLB. The sample included performance data for a thirteen-season time period ranging from 1997 through the 2009 seasons for each respective league. This time period was chosen because it included data on the most recently completed seasons for each league and dates back far enough to include a large number of data points for each league. Additionally, each composite score value for each team in each league was normalized to account for interleague differences in the number of games played. At one extreme, MLB plays 162 regular season games while the NFL only plays 16 regular season games. Thus, normalizing the data to account for these differences across leagues was appropriate.

The second component of the dependent variable was to include cumulate team payroll for each team in each league in each year for the data range. This portion of the outcome variable was intended to measure amount of payroll allocated for the athletes comprising each team's roster. Again, these data were normalized due to differences in salary caps restrictions and total team revenues across leagues. Combining these two

components, a dollar per composite score value was calculated as the measure of performance used. The value of payroll spent to achieve each win as a measure of performance indicates not only the success of each team on the field-of-play but also the efficiency by which performance is being achieved based upon payroll.

3.3 Independent/ Moderator/ Mediating Variables

3.3.1 Age

The age during the year of analysis of each member of the sample will be collected and included as an independent variable. For example, Brian Cashman was GM of MLB's New York Yankees during the 1998 season. He was born July 3, 1967 so his age for the 1998 season was recorded as 31. For the 1999 season, his age was recorded as 32 and so on. The same approach was used for GMs in all four leagues. These data were collected from sports-reference.com.

3.3.2 Functional (front office) experience

One variable was collected for each observation related to functional experience. This variable serves as an indicator of the total number of years that the sampled GM had filled a TMT role in their respective league. Working in other organizations within a given league was acceptable. The idea was to capture the total amount of front office experience each GM had accumulated during each year of the data range. These data were collected through team website and general Google searches.

3.3.3 Tenure w/current organization

The number of years each GM had been employed in their current organization during each year of analysis was collected and included as an independent variable. These data were collected through team website and general Google searches. These searches began with a Google search of the GM's name. In most cases, I was directed to the organization's homepage (e.g., http://www.redwings.nhl.com) where I found a detailed biography on the individual. Typically, these biographies indicated the first year that the individual started working with the organization. From this information, I then extrapolated the appropriate value for this variable based upon the year I was considering. For example, if a GM had begun employment with their current organization in 1993 and I was attempting to assign them a tenure value for the 2000 season, I would assign them a value of 7 for the year 2000 as they had accumulated 7 years of tenure prior to the start of the 2000 season.

3.3.4 Technical (professional playing) experience

This category included those GMs found to have had experience where the number of total years of experience were collected and included as an independent variable in the analysis. Here, each individual GM was searched on the relevant sports-reference.com website for their league. If they had played professionally, they were included in the database on this site. For these players, the total number of years of their playing experience was tallied and included for each year. As all GMs included in the sample had retired, these values remained the same for the entire range of data (1997-2009). For those GMs who did not play professionally, they were assigned a value of 0.

3.3.5 Educational background

Each individual's educational background was coded based upon whether or not they completed a four year undergraduate degree at a college or university. Levels of education were included as a '1' if no college, '2' if some college, '3' if an undergraduate degree was completed, and '4' if a masters or equivalent was completed. These data were collected through team website and general Google searches.

3.3.6 Total team payroll

Each team's total payroll for the each year of analysis was collected. This variable is intended to serve as a proxy for differences in team player resources as measured by difference in total salaries paid from team to team. Payroll data were normalized across leagues to account for differences in payroll ranges. These data were collected from the USA Today's team salary database.

3.3.7 Head coach tenure

For head coach tenure, I focused the number of years of tenure of each team's head coach during each year of the data range. This variable was indicated as the number of years of head coaching experience with the current team. For example, if an NBA head coach was employed by an organization from the beginning of the 2000 season through the conclusion of the 2006 season, they had 6 total years of head coach tenure. If I was collecting data on the 2003 season, this individual was assigned a value of 3 based upon the three completed seasons they had served as the head coach to that point. These data

were collected from each league's sports-reference.com site. The same approach was used for all four leagues included in the analyses.

3.3.8 Head coach tenure squared

To test the proposed curvilinear relationship in Hypotheses 1a-d, it was necessary to create an additional variable called head coach tenure squared. This variable was created by squaring the value assigned to each GM for each team in each year in each league for GM tenure.

3.3.9 Team player talent

I created a cumulative team productivity variable for each team year included in the analysis. For each league, I created a measure to encapsulate the total offensive and defensive prowess of each team analyzed. These values serve as another proxy for delineating inter-organizational differences amongst competing teams in each league sampled. As an example, the NBA values were calculated as composite scores including average points scored and average points against for each team year observation. For the 2006-2007 NBA season, the Detroit Pistons scored an average of 96 points per game which ranked them 20th out of 30 teams. Also during the 2006-2007 season, the Pistons allowed 91.8 points per game which was 2nd best in the NBA. Thus, their composite score for the 2006-2007 season was assigned as 22 based on the cumulative scores assigned for offensive and defensive proficiency. For a team ranked 1st in scoring out of 30 teams and 1st in fewest number of point allowed, their composite score would be 2. Across each league, the lower the composite score, the better the efficiency ranking for each team. A

similar approach will be used for the NFL, NHL, and MLB. This measure shows up as 'Off Def' in the analyses.

3.4 Analyses

All of the variables collected were entered into a series of mixed-effects regression models. Mixed-effects regression modeling is the most appropriate analysis technique due to the fact that the data are nested within four levels including league, year, team, and GM. Random effects were included for individual GM and team in the regression analyses. In addition, the model as well as mediation and moderation hypotheses were tested using path modeling via Structural Equation Modeling (SEM).

Data was collected from reputable sources that have been utilized in previous sport management research wherever possible. As such, data collected were compiled from primary data sources on the Internet including the USA Today, The Baseball Cube, The Football Cube, Sports Reference as well as team and league websites. Post collection, these data were organized in Microsoft Excel prior to input into Stata 12. I compiled a comprehensive list of GMs and demographic variables, moderator variables accounting for differences in player salaries and head coach tenure as well as team performance indicators. I populated a database with these data that were seamlessly analyzed with Stata 12. Upon finalization of the data collection process, hypotheses were tested using mixed-effects regression analyses and SEM. Individual variables and their hypothesized relationships were assessed. In addition, mediator and moderator variables were tested for their impact on the hypothesized relationships.

Chapter 4

Results

4.1 GM Summary

Prior to discussing the results of my analyses, I would like to summarize some key statistics related to the GMs included in my sample. In total, my sample included 276 different GMs. The average age of these GMs was 49.8 with the youngest being 29. The average GM tenure was 5.7 years with a maximum tenure of 37 years. Amongst the GMs included in the sample, the average front office experience was 10.4 years with a maximum of 40 years. Lastly, the average professional playing experience was 3.7 years, however the range extended from 0 (no playing experience) up to 19 years.

4.2 Mixed-effects Regression Modeling

To test the hypotheses proposed in this dissertation, I utilized mixed-effects regression models with crossed random effects and Structural Equation Modeling (SEM). As the analyzed data spanned four levels including league, team, GM and year, untangling the nesting relationships was necessary prior to engaging in hypothesis testing. Each individual GM observation was nested within a year ranging from 1997 to 2009, within a given league, for a specific team. Upon identifying these four levels, I assessed the variance of the random effects of each level in conjunction with my dependent variable of organizational performance. The variances of the random league and year effects were found to be non-significant, meaning that individual leagues and years did not tend to vary in terms of overall expectations on any of the primary

dependent variables. The variances of the team and individual GM random effects were found to significant, suggesting that observations within a given team or within a given GM tended to be correlated. Thus, I only included crossed random effects of individual GM and team in subsequent hypothesis testing where mixed-effects regression modeling was utilized.

Table 1a includes intercorrelations among all exogenous variables included in this study. By definition, tenure and tenure squared were expected to be highly correlated (.91). Normally, this would warrant the removal of one of the tenure variables. However, to test the curvilinear relationship proposed in Hypothesis 1a-e, tenure squared must remain and be included in the regression equation. No other variables are highly correlated (i.e., >.75). Thus, all were included in subsequent models to test the proposed hypotheses.

Table 1b includes a test of the variance inflation factors (VIFs) of the exogenous variables included in the proposed model. The VIF is calculated to measure the amount multicollinearity amongst variables in a regression equation (O'Brien, 2007). Assessing the VIF is necessary to ensure that the standard errors of the estimated coefficients in the models were not being artificially inflated. It is generally accepted that VIFs exceeding 10 represent severe multicollinearity (O'Brien, 2007). From Table 1b, there are no problematic VIFs amongst the GM-specific variables analyzed.

4.2.1 Direct relationships.

Hypothesis testing included a test of each proposed relationship combining data from all four leagues into one analysis. Additionally, each league was analyzed

individually to examine potential league-specific relationships. To test Hypotheses 1-4, I fitted a mixed-effects regression model with crossed random effects of individual GM and team. I used this approach due to the fact that individual GMs could be associated with multiple teams during the range of data included in the sample. This model tested the relationships of each of the GM-specific independent variables with the dependent variable of organizational performance while controlling for differences in team player talent by including each team's payroll (normalized across leagues).

Hypothesis 1 predicted that GM tenure would demonstrate an inverted U-shaped (curvilinear) relationship with organizational performance. Results as presented on Table 2 indicated a p-value of .070 and a positive coefficient (.0011) which suggested marginal support for a negative, linear relationship between GM tenure and organizational performance (H1). Hypothesis 2 predicted that GM front office experience would demonstrate a positive relationship with organizational performance. Results from Table 2 indicated a p-value of .169 and a positive coefficient (.0084), controlling for the other independent variables in this model. Thus, there was no support for this hypothesis. Hypothesis 3 predicted that GM professional playing experience would demonstrate a positive relationship with organizational performance. Results from Table 2 indicated a p-value of .693. Thus, there is no support for H3. Hypothesis 4 predicted that GM age would demonstrate an inverted U-shaped (curvilinear) relationship with organizational performance. Results from Table 2 indicated a p-value of .123 and a negative coefficient (.0005) which suggested marginal support for a positive, curvilinear relationship between GM age and organizational performance. Thus, H4 is partially supported.

Next, I tested the hypothesized relationships on a league-by-league basis. For MLB (see Table 3), Hypothesis 1a predicted that GM tenure would demonstrate an inverted U-shaped (curvilinear) relationship with organizational performance. Results indicated a p-value of .063 and a positive coefficient (.0028) which suggested marginal support for a linear relationship between GM tenure and organizational performance (H1b). Hypothesis 2a predicted that GM front office experience would demonstrate a positive relationship with organizational performance. Results indicated a p-value of .615 and a negative coefficient (-.0034). Thus, there is no support for H2a. Hypothesis 3a predicted that GM professional playing experience would demonstrate a positive relationship with organizational performance. Results indicated a p-value of .811 and a negative coefficient (-.0021). Thus, there is no support for H3a. Hypothesis 4a predicted that GM age would demonstrate a positive relationship with organizational performance. Results indicated a p-value of .215 and a positive coefficient (.0064). Thus, there is no support for H4a.

For the NBA (see Table 4), Hypothesis 1b predicted that GM tenure would demonstrate an inverted U-shaped (curvilinear) relationship with organizational performance. Results indicated a p-value of .779. Thus, there is no support for H1b. Hypothesis 2b predicted that GM front office experience would demonstrate a positive relationship with organizational performance. Results indicated a p-value of .078 and a positive coefficient (.0278) which suggested marginal support for a positive relationship between GM front office experience and organizational performance. Thus, there is partial support for H2b. Hypothesis 3b predicted that GM professional playing experience would demonstrate a positive relationship with organizational performance. Results

indicated a p-value of .458. Thus, there is no support for H3b. Hypothesis 4b predicted that GM age would demonstrate a positive relationship with organizational performance. Results indicated a p-value of .275. Thus, there is no support for H4b.

For the NFL (see Table 5), Hypothesis 1c predicted that GM tenure would demonstrate an inverted U-shaped (curvilinear) relationship with organizational performance. Results indicated a p-value of .007and a positive coefficient (.0024) which suggested support for a linear relationship between GM tenure and organizational performance (H1c). Thus, there is evidence to support H1c. Hypothesis 2c predicted that GM front office experience would demonstrate a positive relationship with organizational performance. Results indicated a p-value of .376. Thus, there is no support for H2c. Hypothesis 3c predicted that GM professional playing experience would demonstrate a positive relationship with organizational performance. Results indicated a p-value of .222. Thus, there is no support for H3c. Hypothesis 4c predicted that GM age would demonstrate a positive relationship with organizational performance. Results indicated a p-value of .501. Thus, there is no support for H4c.

For the NHL (see Table 6), Hypothesis 1d predicted that GM tenure would demonstrate an inverted U-shaped (curvilinear) relationship with organizational performance. Results indicated a p-value of .728. Thus, there is no evidence to support H1d. Hypothesis 2e predicted that GM front office experience would demonstrate a positive relationship with organizational performance. Results indicated a p-value of .123. Thus, there is no support for H2d. Hypothesis 3d predicted that GM professional playing experience would demonstrate a positive relationship with organizational performance. Results indicated a p-value of .702. Thus, there is no support for H3d.

Hypothesis 4d predicted that GM age would demonstrate a positive relationship with organizational performance. Results indicated a p-value of .385. Thus, there is no support for H4d.

4.3 Mediation

Hypothesis 5 suggested that cumulative team player talent mediates the relationship between the GM and organizational performance. The proposed relationship is referred to as a basic mediated model (Edwards and Lambert, 2007) and is depicted in Figure 5. To test this hypothesis, I employed a piecewise approach (Baron and Kenny, 1986) that included three steps to test for mediation. Step 1 (see Table 7) involved testing the relationships of the independent variables including GM age, tenure, front office experience and professional playing experience with the dependent variable of organizational performance. In order to establish mediation, one or more of the independent variables must demonstrate a significant relationship (direct effect) with the dependent variable to proceed with the test. Since age, tenure with current team, tenure squared and front office experience are all marginally significant or close to being so, I will remove only GM professional playing experience from the model prior to executing the next step in the test. Step 2 (see Table 8) involves testing the relationships of the independent variables with the mediating variable of team player talent where the mediating variable is set as the outcome variable in the regression equation. By setting the mediating variable as the outcome, this step is intended to establish if there is a significant relationship between the independent variables and the mediator. Both tenure with current team and tenure squared demonstrate a significant relationship, thus I

proceed to the final step in the process. Step 3 (see Table 9) is intended to test the relationship between the mediator variable and the dependent variable while controlling for the independent variables. By including both the mediating and independent variables in the regression equation, this step establishes an effect of the mediator on the dependent variables while controlling for the independent variables of interest. Because the effects of the independent variables become non-significant, we have evidence that team player talent fully mediates the relationship between GM tenure and organizational performance.

4.4 Moderation

Hypothesis 6 & 7 tested the extent to which head coach tenure and payroll flexibility moderate the relationship between the independent variables of GM age, tenure, front office experience and professional playing experience and the mediating variable of team player talent. As the moderators are hypothesized to affect the path between the independent variables and the mediating variable, the mediator is entered into the equation as the dependent variable. In subsequent regression models, the moderating variables are entered as continuous variables. Later, I will test the proposed moderating relationships using SEM where the moderators are entered as categorical variables.

Examining the five interactions between the independent variables and head coach tenure as they address Hypotheses 6a - 6e, there are significant interactions between the GM's tenure and the head coach's tenure (p = .049) and the number of years of front office experience for the GM and the head coach's tenure (p = .007). There is

also a marginally significant interaction between the number of years of professional playing experience for the GM and the head coach's tenure (.081). For the GM tenure and professional playing experience relationships, the coefficient is positive thus, these relationships can be explained by saying that as values of head coach tenure increase, the relationships of GM tenure and professional playing experience with team player talent increases. For the GM front office experience and head coach tenure relationship, the coefficient is negative. This relationship can be explained by saying that as the value of head coach tenure increases, the relationship between front office experience and team player talent decreases. Thus, there is evidence of a moderating effect of head coach tenure on the relationship between years of GM tenure, front office and playing experience and team player talent. Thus, there is support for H7b (p=.049), H7d (p=.007), and H7e (p=.081) (see Table 10).

In interpreting these results as they address Hypotheses 7a - 7e, the effect of each interaction on the mediating variable serves as an indicator of moderation. Looking at the five interactions between the independent variables and team composition (payroll), there is a significant interaction (p = .026) between the number of years of professional playing experience for the GM and the team's payroll. As the coefficient is negative, this relationship can be explained by saying that as the interaction between GM professional playing experience and payroll increases, team player talent decreases. Thus, there is evidence for a moderating effect of team composition (payroll) on the relationship between GM playing experience and team player talent (see Table 10).

4.5 SEM

This section of the analyses utilized Structural Equation Modeling (SEM) to further examine hypotheses previously defined and tested via regression modeling. SEM was used to fit path models to my data to re-test the mediation and moderation hypotheses and robust standard errors for the path coefficients were computed to reflect the clustering (by team and GM) in my data set. This approach enabled standard errors to be estimated in a way that allowed the residuals for the dependent variable to be correlated within a team/ GM combination. A visual depiction of the path model is displayed in Model 1. Paths 'a' through 'e' represent links between exogenous variables related specifically to the GM and the proposed mediating variable of team player talent. Path 'f' represents the link between the mediating variable of team player talent and the outcome variable, defined as organizational performance.

The intent of employing SEM is to provide additional testing of the mediation and moderation hypotheses previously specified while assessing predictor – outcome relationships. As there were no latent constructs included in the models, a multi-group path analysis was utilized due to the presence of only observed variables in the data. As a starting point, Model 1 is tested to assess the extent to which the conceptual model fits the observed data. From this analysis, tests comparing the covariance of the variables implied by Model 1 to the actual covariances in the observed data resulted in a chi-squared of 17.4 on 5 degrees of freedom with a p-value of .004. Additionally, the proposed model has a root mean square of approximation (RMSEA) of .041 (90% CI: 0.021 - 0.063) which is acceptable as an indicator of close fit. Indeed, the p-value associated with RMSEA statistic is 0.723 which indicates that we would not reject the

null hypothesis of a close fit. In addition, path estimates were computed for each path specified in the model above. The path 'a' estimate is .0407; the path 'b' estimate is .9257; the path 'c' estimate is .0339; the path 'd' estimate is .0451; the path 'e' estimate is .0279 and; the path 'f' estimate is .0335. The most important output of this model is the RMSEA of .041. Since the value is <0.05, a good fit between the observed covariances and implied covariances of the variables based on the fitted model is suggested. Thus, the test of Model 1 provides initial empirical support my proposed conceptual model.

Additionally, modification indices were examined to see if additional paths may decrease the overall chi-square statistic for the model as a measure of fit, with lower chi-square statistics indicating better fit. The analysis of the modification indices suggested including direct paths from GM age to organizational performance as well as GM front office experience to organizational performance. These paths will be included in Model 3.

The next step in the process is to test a second, more comprehensive version of the model (Model 2) in which I account for the fact that the data are not independent observations. Visually, the model is depicted identically to Model 1. The difference is that in Model 2 a measure is created that combines GM and team into a single cluster variable. The difference between these two models lies in accounting for the aforementioned cluster variable. I re-ran Model 1, but computed robust standard errors accounting for the likely correlation of residuals within the same team/ GM combination for all paths previously specified. Results indicated the following robust standard errors: the path 'a' estimate is .0817; the path 'b' estimate is .2046; the path 'c' estimate is

.0062; the path 'd' estimate is .0955; the path 'e' estimate is .0922 and; the path 'f' estimate is .0033.

The third version (Model 3) of the model tests all previously discussed paths and includes direct paths from GM age to organizational performance and GM front office experience to organizational performance as suggested by the modification indices for Model 1. Results reported in Table 11 indicate that the suggested modification indices do not add anything significant to the model. Thus, Model 2 is the most parsimonious in terms of fit.

Model 4 is intended to test the indirect effects (that partly defined Models 1, 2, and 3) of the exogenous variables on the outcome through the mediator of team player talent. Visually, this model looks identical to Model 3. Paths 'af', 'bf', 'cf', 'df', and 'ef' are included in this model (see Table 12). Results indicate significant indirect effects of GM tenure and GM tenure squared on organizational performance through team player talent. Thus, the relationships between GM tenure and GM tenure squared and organizational performance are partially mediated by team player talent.

Model 5 is intended to assess the extent to which the proposed moderating variables of head coach tenure and team payroll impact the paths (relationships) between the GM variables of age, tenure, tenure squared, front office experience and professional playing experience and team player talent. As depicted above, paths 'a', 'b', 'c', 'd', and 'e' are included in this model. Head coach tenure and payroll data were grouped into eight and seven groups respectively to test the moderating effects of each group on the GM – team player talent relationships described above (see Table 13). Results in Tables 14 and 16 indicate a moderating effect of head coach tenure on the relationships between

GM tenure, tenure squared, front office experience, and professional playing experience and team player talent. Additionally, results in Tables 15 and 17 indicate a moderating effect of team payroll on the relationships between GM age, tenure, tenure squared, front office experience and professional playing experience and team player talent. Thus, there is at least partial support for H6a-e and H7b-e. Figures 6 and 7 depict the patterns of interactions as proposed by the moderation hypotheses. As indicated in Appendix C (outputs 6a and 6b), GM tenure and tenure squared were significant, thus they were included in the interaction plots. The following equation was used to calculate these interactions:

Intercept (group) + coef (group) * tenure + coef (group) * tenure^2 (group) + coef age (group) * mean age + coef front office experience (group) * mean front office experience + coef professional playing experience * mean professional playing experience

Chapter 5

Discussion

5.1 Summary of Research

The focus of this dissertation was to analyze the GM – organizational performance relationship in the North American professional sport context. Through this analysis, the intent was to gain a better understanding of how the unique background and experiences of GMs impact the subsequent performance of their respective organizations via player personnel decision making. The model which I theoretically developed included five GM-specific variables (age, tenure with current team, tenure with current team squared, front office experience and professional playing experience), a mediating variable (team player talent) and a dependent variable (organizational performance. Additionally, two moderating variables (team payroll and head coach tenure) were included in the analysis. To examine this model, I performed both regression analyses and structural equation modeling to test hypotheses to examine 13 years of data at the GM, team, league, and year levels of analyses. In the discussion section of this dissertation, I begin with a summary of findings followed by a detailed discussion of findings as they relate specifically to my hypotheses. Next, I discuss both strengths and limitations as they related to this research. Finally, I finish with a discussion of the implications of this dissertation for UET and sport management research.

5.2 Summary of Findings

The central research question this dissertation focused on addressing was determining if and to what extent GM attributes demonstrated any relationship with organizational performance in the North American professional sport context.

Additionally, the extent to which an individual team's player talent mediates the ability of a GM to impact organizational performance was examined. Finally, logics of action including team payroll and head coach tenure were examined as potential moderators in the GM – team player talent relationship. I ran several analyses first testing all four leagues as one comprehensive set of data and then testing my GM – organizational performance hypotheses on a league-by-league basis to uncover differences unique to each league.

The mixed-effects regression analyses examined the relationship between GM-related variables and performance at the organizational level. For data that included all four leagues, results indicated that both GM tenure and age were related to organizational performance. Fitting the data to a path model using SEM provided similar results although the strength of the relationship between GM age and performance became weaker while the relationship between tenure and performance increased. Additionally, both analyses found no evidence for an effect of GM front office or playing experience on organizational performance when analyzing data from all four leagues.

Individual league analysis utilizing mixed-effects regression modeling found modest evidence of relationships between GM-specific variables and organizational performance. Exceptions included a linear relationship between GM tenure and

organizational performance in MLB; a positive relationship between GM tenure and organizational performance in the NFL; and a positive relationship between GM front office experience and organizational performance in the NBA.

In addition to examining GM-specific variables as they relate to organizational performance, this research also examined the extent to which an individual team's composition of player talent mediates the relationship between the GM and the performance of the organization. Again, this conceptual model was tested two ways with the first applying the Baron Kenny regression-based approach to establishing mediation (Baron & Kenny, 1986) and the second testing indirect effects of the GM variables on organizational performance through the mediating variable using SEM. Results from both analyses indicated that team player talent mediates the GM tenure – organizational performance relationship.

The final component of this analysis examined the extent to which team composition (payroll) and head coach tenure impact (moderate) the GM's ability to impact the team player talent on a given team. Thus, team player talent was included as the dependent variable while the interactions between each GM variable and payroll and head coach tenure were tested using both mixed-effects regression modeling and SEM. Results from regression modeling indicate evidence for a moderating effect of team composition (payroll) on the relationship between GM playing experience and team player talent. In addition, a moderating effect of head coach tenure on the relationship between years of GM tenure, front office and playing experience and team player talent is supported.

5.3 Discussion of Findings

Beliefs and views are engrained in executives as they accrue tenure in TMT-level positions within organizations in a common industry (Henderson et al., 2006). This fixed paradigm conceptualization of CEOs suggests that diversity of backgrounds and experiences will dictate the future success of an executive in terms of their ability to adapt to a dynamic environment. As such, longer-tenured executives become more committed to their approach and more set in their ways as they accrue tenure (Staw & Ross, 1987). As a result, response to changes in the environment will be slower for longer-tenured TMT employees. Related, Hambrick and Fukutomi (1991) found that as tenure increases for executives within one organization, their isolation from the external environment increases. As a result, they eventually become static in terms of their abilities related to driving organizational performance in a dynamic competitive environment. Hambrick (1995) found that as TMT employee tenure increases, other TMT employees begin to embrace similar philosophies. As result, those who do not are likely to leave the organization or be replaced. Thus, as TMT employee tenure increases, consensus will build amongst other TMT-level employees and strategic approaches will begin to suffer from a lack of innovation. Hypotheses 1a-d suggested that GM tenure and organizational performance would demonstrate a curvilinear relationship. Results show a negative, linear relationship between GM tenure and organizational performance. This indicates that organizational performance eventually decreases as GM tenure increases over time. Thus, there could be an effect of GMs who move from team to team and attempt to implement strategies they had adopted previously in new organizations, despite a rapidly changing environment. This could point to a lack of innovation amongst

the sample of GMs included in the sample. Given the range of data (1997-2009) and the fact that innovations related to player talent evaluation and selection have risen to prominence in the past 5-7 years, this finding is not surprising.

With respect to TMT employee functional experience, Boeker (1997b) found that TMT migration across organizations in the same industry directly impact subsequent strategy development. As such, the unique background and experiences of these executives will shape the strategies they implement in their new organization. Related, Tushman and Rosenkopf (1996) suggested that executive succession and TMT employee turnover impact subsequent strategy and ultimately, organizational performance. As a result, TMT employee functional experience backgrounds can serve as a precursor to successful new strategy development whereby growth or innovation opportunities are exploited to improve organizational performance (Kor, 2003). Hypotheses 2a-d suggested a positive relationship between GM functional experience and organizational performance. Results indicated a marginally positive relationship between GM functional experience and organizational performance. The fact that the relationship wasn't stronger could point to an interesting phenomena occurring in these leagues where certain GMs are benefitting more than others based upon their previous front office experience. I suspect that the quality of previous front office experience is important here such that the organization and TMT team that GMs had worked with is important in predicting their future successes as a GM.

TMTs comprised of employees with hands-on experience in implementing innovations are more likely to innovate in their roles as executives (Chuang et al., 2009; West & Anderson, 1996). Thus, GMs who were former players might have been more

likely to have been exposed to innovative approaches to comprising team player talent. Thus, these executives were expected to be more innovative in their approach with respect to performing as a GM. Hypotheses 3a-d proposed a positive relationship between GM technical experience and organizational performance. Results indicated no significant relationship between GM technical (professional playing) experience and organizational performance. It's likely that this finding was influenced by the fact that former players who were GMs during the data range included in the sample played in an era where human resource innovations were not commonly discussed or acknowledged amongst organizations in the four leagues analyzed. Thus, although executives might have played professionally, they played at a time where innovative approaches had not yet gained traction as norms of behavior for GMs.

The age of TMT members has been found to be negatively related to innovation adoptions (Chuang et al., 2009). As a result, younger GMs were expected to be more dynamic in terms of their strategic approach to human resource decision making.

Specifically, it was expected that that younger GMs would be more likely to utilize strategies that differ from traditional approaches to evaluating and selecting team player talent. Despite a greater propensity for innovation, dramatic changes in strategy are anticipated to take several years to gain traction within an organization. As such, Hypotheses 4a-d proposed a curvilinear relationship between GM age and organizational performance. Results indicated support for a significant, positive curvilinear relationship between GM age and organizational performance. This supports the idea that as GMs get older, their unique strategic approach to evaluating and selecting player talent begins to

take root within the organization and as result, leads to performance improvements for the team. However, these improvements will begin to dissipate over time.

I hypothesized that the extent to which a GM's age, functional experience, professional playing experience and tenure drives organizational performance would be mediated by the team's composition of team player talent for a given team in a given year in a given league. Stated another way, team player talent was expected to mediate the extent to which a GM can impact organizational performance via their background and experiences. Results indicated that the relationship between GM tenure and organizational performance is mediated by team player talent. This means that the GM's tenure with their organization is the strongest indicator of the overall quality of team player talent and that team player talent drives organizational performance in a given season. When considering the four GM-related variables included in the analyses, the tenure-team player talent-organizational performance relationship seems logical given that as GM tenure increases, you would expect both team player talent and subsequent performance in terms of allocating payroll efficiently to perform on the field at a high level to increase.

I hypothesized that two primary factors would moderate the extent to which a GM can impact a team's roster of player talent. Logics of action related to each team's head coach and the extent to which they have influence on the evaluation and selection of player talent as well as the extent to which payroll constraints limit a GMs ability to sign top-tier players were both introduced as contingencies in the GM – team player talent relationship. Results indicated that both head coach tenure and team payroll directly impact the GM's ability to impact the roster of team player talent. These findings are not

surprising given that GMs do not operate independently in any of the organizations included in the sample. Payroll constraints exist to some degree in each organization comprising the leagues analyzed and there are examples in each league of experienced, successful head coaches such as Bill Belichick of the New England Patriots in the NFL who have direct say in all player personnel decision making activities.

5.4 Strengths, Limitations and Extensions

In this section of the dissertation, I will detail the strengths, limitations, and opportunities for future research. First, I will focus my discussion on the primary strengths of the research. Next, I will identify and explain some limitations of both the methodology and data utilized. Finally, I will discuss areas of opportunity for future research building on the foundation established through this dissertation.

The first strength of this research is related to the theoretical grounding employed as a basis for the conceptual model and hypotheses that were developed and tested. Specifically, this dissertation served as an introduction of UET to the sport management context. While the dearth of empirical research examining executive managers and their contribution to performance in the sport context is surprising, access issues to these employees creates a real hurdle for scholars to clear while attempting to quantify their impact on organizations. Through the use of UET as a theoretical framework, the current research demonstrated an approach to investigating these individuals while using their backgrounds and experiences as proxies for how they would make decisions in the context of their leagues and organizations. Thus, by taking advantage of the vast amounts of data available on individual, team, and league performance in the sport context, we can

begin to investigate how these executives shape the performance of the organizations they lead. In addition, I have established empirical support for the conceptual model I introduced detailing the GM – team player talent – organizational performance relationship. Specifically, by fitting the proposed path model via SEM, I have linked individual GM attributes to subsequent organizational performance. Thus, one possible path model explaining these relationships has been quantified so that future research might examine this relationship in greater depth and detail.

An additional strength of this research lies in the multi-level analyses that were employed to examine the data and associated hypotheses. By integrating both micro and macro theories into a single conceptual model, this study concurrently tested both individual and organization level variables and the extent to which they impacted performance. Related, as the data included in the analyses represented four levels including the league, year, organization and individual GM, a comprehensive approach was utilized to test hypotheses using a mixed-effects regression approach as well as path-modeling via SEM. In the extant sport management literature, there is a paucity of research employing both regression analyses and SEM to test multi-level models. Thus, the current research provides a more robust test of the proposed conceptual model examining the GM – team player talent – organizational performance relationship.

A third key strength of this study was the manner in which the dependent variable of organizational performance was operationalized to include both financial and competitive dimensions. As previous sport management literature has typically measured performance as either a measure of financial or on-the-field performance, the manner in which I computed performance as a measure of payroll spent for each win on the field-of-

play provided an integrated measure intended as a more comprehensive depiction of performance from the perspective of individual organizations. This approach assumes that each individual organization comprising the research context approaches team player talent decisions with a goal of maximizing efficiency. As the GM's primary responsibility lies within maximizing talent while minimizing payroll, the approach employed here is intended to capture performance in this manner.

Despite the strengths of this dissertation, this research also had a few notable limitations. First, the conceptual model tested in this research assumes that the analyzed organizations operate in such a way that GMs have full authority over decision making with respect to team player talent. Well this is the case in a majority of the organizations comprising the North American professional sport context it is not necessarily true all of the time. There are examples in each of the four leagues of organizations (e.g., Jerry Jones of the NFL's Dallas Cowboys) where an owner both drives and executes all player personnel decisions. Thus, future research should include consideration for ownership in the form of demographic and experiential variables as well as a more focused approach to understanding the actual job demands of each organization's GM. This limitation has been discussed by Hambrick (2007) as an opportunity for future UET research. Given the opportunity provided by the sport context analyzed in this research, this area provides a basis for expanding our understanding of how upper echelons interact to contrive and enact strategic decisions in organizations.

An additional limitation of this research centers around the data that were analyzed related to the GMs who comprised my sample. Specifically, multicollinearity concerns related to the GM-specific variables of tenure, front office experience,

professional playing experience and age exist due to the nature of the relationships between these variables. While I tested for multicollinearity to assess how much the variance was inflated by correlation between the GM variables, the inherent relationships between GM tenure, front office experience and age serve as a potential issue in discussing the observed relationships as measured by the multi-level mixed effects regression models used to test the hypothesized direct relationships.

Related, this dissertation has established a link between GMs and organizational performance; a mediating effect of team player talent on the GM – organizational performance relationship; and a moderating effect of both team payroll and head coach tenure on the GM – team player talent relationship. Despite these findings, I acknowledge that there are several other factors that influence both team player talent and performance in the organizations analyzed in this research. As such, it stands to reason that all of the variance that exists from team-to-team in the four leagues cannot be explained exclusively by the model I've developed and tested in this dissertation. Various other factors including institutional and environmental factors, influence from ownership and other members of the TMT as well as the extent to which coaches maximize their talent in terms of on-the-field output are all important considerations in painting a comprehensive picture of inter-organizational performance variations.

Another limitation of this dissertation is related to the issue of endogeneity.

Hambrick (2007) described this issue in the context of UET research as a matter of causality. He proposed that executive strategic decision making might actually be driven by boards of directors of organizations more so than by individual members of the TMT. Specifically, he claimed that boards hire TMT employees because they feel that they have

the proper composition of background and educational experiences so that they will act in accordance with what the board wants. In the North American professional sport context, this could also be an issue. For example, if an owner has a set of abilities that they want a GM to possess, then they are likely to narrow their search to only individuals who possess these traits. As such, GMs may act to fulfill the wishes of ownership rather than on the basis of how their own unique set of experiences might suggest. As a result, it might turn out that more GMs than anticipated are merely extensions of ownership and thus, do not apply their own knowledge to team player talent decision making. To address this concern, future research could further examine GM – ownership dynamics. In particular, assessing GM attributes and experiences and the extent to which they are aligned with those of the owner should inform this limitation. GMs could be categorized in terms of the amount of managerial discretion they are granted over HR decision making by ownership (Finklestein & Hambrick, 1990).

The third limitation of this research is related to the experiential variables included in the model. While extant UET research was used as a theoretical foundation to operationalize the variables included in the model and subsequently tested, the unique context of sport might pose some potential issues with utilizing this approach. For example, established UET research analyzing the TMT – strategic choice – organizational performance relationship does not have to account for unique measures of performance determined on a competitive field-of-play. Although all organizations compete to some degree, the manner in which competition perpetuates itself in the sport context is different than in contemporary organizations. As such, simply applying UET to the sport context may be problematic without a more thorough understanding of TMT

interactions as well as the institutional environment and the impact it has on individual decision making. Thus, future research may address this issue by interviewing GMs, owners, and other prominent league officials to enhance our understanding of league and organizational dynamics. By learning more about the league environment in this regard, the manner in which UET is subsequently applied in sport management research may be adjusted to better fit the unique attributes of the sport context.

A potential extension of this research might adapt the GM – team player talent – organizational performance model that I've developed and tested to examine similar relationships in other types of sport organizations. For example, a logical application might consider the extent to which athletic directors (ADs) influence the performance of their athletic departments through their HR decision making in a manner similar to what I've tested here. Here, data could be collected on a sample of athletic directors leading large intercollegiate athletic departments in the United States. Specifically, demographic and experiential data could be collected and tested via hypotheses examining how ADs impact the financial performance of their departments via their unique backgrounds and experiences. It is my hope that this dissertation will serve as a foundation for subsequent studies that might examine TMT – organizational performance relationships in other types of sport organizations.

5.5 Conclusion and Implications

This dissertation offers several important contributions to the current sport management literature. From a theoretical standpoint, the application of UET and institutional theory as a basis for this research offers a strong foundation for examining

the GM – team player talent – organizational performance relationship. With respect to the methodological approach employed, analyzing GM and team data utilizing multilevel regression modeling and SEM provided a strong analytical framework for assessing model fit and testing the hypothesized relationships. Findings indicated significant relationships between GM age and tenure and organizational performance as well as evidence that the GM tenure – organizational performance relationship is mediated by team player talent. In addition, results supported a moderating effect of both team payroll and head coach tenure on the GM's ability to impact the organization's composition of team player talent. Thus, as a foundational study introducing UET to sport management research and examining the manner by which executive's impact organizational performance in the North American professional sport context, this dissertation established a basis for future studies to further examine these relationships.

In addition, this research has several important implications for practice. First, the focus of ownership on specific GM experiences as the driving force behind hiring decisions can be informed by the findings of this dissertation. For example, some leagues or individual owners might place more emphasis on prior playing experience as a predictor of successful GM performance. Results indicate that this is of little significance in terms of predicting future organizational performance via team player talent.

Additionally, both team payroll and head coach tenure directly impact the GM's ability to influence the composition of team player talent through their unique background and experiences. For ownership, this finding could be applied to temper expectations based upon how strong these factors are for a given organization. In an organization where a longer-tenured head coach is in power but payroll is limited, a realistic expectation of the

GM might be that he or she can only have minimal impact on the roster, despite the unique experiences they might bring to the job. An extension of this for individual organizations could be that ownership needs to consider hiring decisions for head coaches in conjunction with their team's GM.

The most significant limitation of this research lies within the simplified manner in which the proposed model examines the GM – team player talent – organizational performance relationship. As discussed, several factors including ownership and institutional variables are likely influencing the proposed model at some level. Future research examining the role of executives in shaping organizational performance through their decision making would need to further examine these ancillary factors as they pertain to shaping organizational actions. In conclusion, this research provides a foundation for examining how TMT employees impact organizational performance through their strategic actions in the North American professional sport context. The broad area of study examining executives in sport organizations represents a gap in the sport management literature. This dissertation aimed to take the first step in establishing a foundation of knowledge in this area.

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Appendix A – Output Tables

Table A.1a – Intercorrelations among all exogenous variables included in the study

(obs=1388)

	Age	Tenure~m	Tenure~d	Front_~e	Profes~_	Educat~n
Age	1.0000					
Tenure_wit~m	0.4682	1.0000				
Tenure_squ~d	0.4672	0.9053	1.0000			
Front_offi~e	0.6276	0.4954	0.4707	1.0000		
Profession~_	0.0392	-0.0271	-0.0413	-0.1038	1.0000	
Education	-0.1296	-0.0719	-0.0493	0.0017	-0.3646	1.0000

Table A.1b - VIFs for all exogenous variables included in the study

Variable	VIF	1/VIF
Tenure_wit~m Tenure_squ~d Front offi~e	5.75 5.63 1.85	0.173768 0.177558 0.540442
Age Profession~_	1.79 1.03	0.557310 0.969126
Mean VIF	3.21	

Table A.2 – Mixed-effects regression analyses testing Hypotheses 1-4

Mixed-effects ML regression Group variable: _all	Number of obs Number of groups		1388
	Obs per group: mir avg max	=	1388 1388.0 1388
Log likelihood = -1731.9176	Wald chi2(9) Prob > chi2	=	196.56

zcomp_score	Coef.	Std. Err.	Z	P> z	[95% Conf.	. Interval]
Age age_squared Tenure_with_current_team Tenure_squared Front_office_experience	.0638226 0004999 044748 .0015775	.033632 .000324 .0144761 .0006876	1.90 -1.54 -3.09 2.29 1.36	0.058 0.123 0.002 0.022 0.175	002095 0011349 0731206 .0002298 0037184	.1297401 .0001351 0163753 .0029252 .020446
Professional_playing_experience_	.0015051	.0072216	0.21	0.835	0126491	.0156592
z_payroll coach tenure	.3499982 0353695	.0269929	12.97 -3.77	0.000	.297093 0537437	.4029034 0169953
Education	0156097	.0434578	-0.36	0.719	1007854	.069566
_cons	-1.635581	.8604804	-1.90	0.057	-3.322092	.0509292

Table A.3 – Mixed-effects regression analyses testing Hypotheses 1-4 for MLB

Mixed-effects ML regression Group variable: _all	Number of obs Number of groups	=	383 1
	Obs per group: mir avg	=	383 383.0 383
Log likelihood = -208.24458	Wald chi2(8) Prob > chi2	=	1098.22

zcomp_score	Coef.	Std. Err.	Z	P> z	[95% Conf.	Interval]
Age	.0064306	.0051871	1.24	0.215	003736	.0165971
Tenure_with_current_team	041626	.0205149	-2.03	0.042	0818345	0014176
Tenure_squared	.0027582	.0014813	1.86	0.063	0001452	.0056615
Front_office_experience	0033887	.0067409	-0.50	0.615	0166005	.0098232
Professional_playing_experience_	0021004	.0087685	-0.24	0.811	0192865	.0150856
z_payroll	.9592934	.0293705	32.66	0.000	.9017283	1.016858
coach_tenure	0190642	.0075718	-2.52	0.012	0339046	0042238
Education	0175207	.0388514	-0.45	0.652	0936681	.0586267
_cons	0224748	.2426452	-0.09	0.926	4980506	.4531009

Table A.4 – Mixed-effects regression analyses testing Hypotheses 1-4 for the NBA

Mixed-effects ML regression Group variable: _all	Number of obs Number of groups	= =	333 1
	Obs per group: min avg	=	333 333.0 333
Log likelihood = -422.302	Wald chi2(8) Prob > chi2	= =	59.90 0.0000

zcomp_score	Coef.	Std. Err.	Z	P> z	[95% Conf.	Interval]
Age	.0158766	.0145487	1.09	0.275	0126384	.0443915
Tenure_with_current_team	0168408	.0382101	-0.44	0.659	0917312	.0580496
Tenure_squared	0006242	.0022243	-0.28	0.779	0049838	.0037353
Front_office_experience	.0278496	.0157924	1.76	0.078	003103	.0588021
Professional_playing_experience_	0116381	.0156683	-0.74	0.458	0423475	.0190713
z_payroll	.2576968	.0555598	4.64	0.000	.1488016	.366592
coach_tenure	1168217	.0213543	-5.47	0.000	1586754	074968
Education	3116282	.1605021	-1.94	0.052	6262066	.0029502
_cons	.5124043	.8774101	0.58	0.559	-1.207288	2.232096

Table A.5 – Mixed-effects regression analyses testing Hypotheses 1-4 for the NFL

Mixed-effects ML regression Group variable: _all	Number of obs Number of groups	= s =	
	Obs per group: n	min =	327
	ā	avg =	327.0
	r	max =	327
	Wald chi2(8)	=	17.96
Log likelihood = -448.61372	Prob > chi2	=	0.0215

zcomp_score	Coef.	Std. Err.	Z	P> z	[95% Conf.	Interval]
Age	.006337	.0094136	0.67	0.501	0121134	.0247873
Tenure_with_current_team	0738504	.0279518	-2.64	0.008	1286348	0190659
Tenure_squared	.0023832	.0008818	2.70	0.007	.0006549	.0041115
Front_office_experience	.0088213	.0099661	0.89	0.376	0107119	.0283544
Professional_playing_experience_	.022407	.0183372	1.22	0.222	0135333	.0583473
z_payroll	.091155	.0514293	1.77	0.076	0096445	.1919546
coach_tenure	0317114	.0203397	-1.56	0.119	0715765	.0081537
Education	081098	.1230518	-0.66	0.510	3222751	.1600791
_cons	.1910299	.6618214	0.29	0.773	-1.106116	1.488176

Table A.6 – Mixed-effects regression analyses testing Hypotheses 1-4 for the NHL

Mixed-effects ML regression Group variable: _all	Number of obs	s	
	Obs per group: 1	min	= 345
	ė	avg	= 345.0
	I	max	= 345
	Wald chi2(8)		= 63.43
Log likelihood = -428.79327	Prob > chi2		= 0.0000

zcomp_score	Coef.	Std. Err.	Z	P> z	[95% Conf.	Interval]
Age	.0105032	.0120812	0.87	0.385	0131756	.0341819
Tenure_with_current_team	0322307	.0289643	-1.11	0.266	0889998	.0245383
Tenure_squared	.0004756	.0013682	0.35	0.728	0022059	.0031572
Front office experience	.0191495	.0124002	1.54	0.123	0051543	.0434534
Professional_playing_experience_	.0047029	.0123064	0.38	0.702	0194171	.028823
z_payroll	.4397482	.0586519	7.50	0.000	.3247927	.5547038
coach_tenure	0286747	.0230677	-1.24	0.214	0738866	.0165371
Education	.0463936	.0665058	0.70	0.485	0839554	.1767427
_cons	6124298	.6091624	-1.01	0.315	-1.806366	.5815066

Table A.7 – Baron & Kenny test for mediation (Step 1)

Mixed-effects ML regression	Number of obs	=	1388
Group variable: _all	Number of groups	=	1
	Obs per group: mi	n =	1388
	av	g =	1388.0
	ma	x =	1388
	Wald chi2(5)	=	15.30
Log likelihood = -1810.5521	Prob > chi2	=	0.0092

zcomp_score	Coef.	Std. Err.	z	P> z	[95% Conf.	. Interval]
Age	.0115797	.0059131	1.96	0.050	-9.67e-06	.0231691
Tenure_with_current_team	029985	.0142923	-2.10	0.036	0579973	0019726
Tenure_squared	.0009033	.0006667	1.35	0.175	0004034	.0022099
Front_office_experience	.0088379	.0067008	1.32	0.187	0042955	.0219713
Professional_playing_experience_	.0040095	.0075325	0.53	0.595	010754	.018773
_cons	5450301	.2570325	-2.12	0.034	-1.048805	0412556

Table A.8 – Baron & Kenny test for mediation (Step 2)

Mixed-effects ML regression Group variable: _all	Number of obs Number of groups		1388 1
		n = g = x =	1388 1388.0 1388
Log likelihood = -5398.6057	Wald chi2(4) Prob > chi2	=	22.86

Off_Def	Coef.	Std. Err.	z	P> z	[95% Conf.	Interval]
Age	.088582	.078327	1.13	0.258	0649361	.2421
Tenure_with_current_team	8258857	.1888506	-4.37	0.000	-1.196026	4557454
Tenure_squared	.0360557	.0087214	4.13	0.000	.018962	.0531493
Front_office_experience	.0713355	.0895069	0.80	0.425	1040948	.2467657
_cons	29.02757	3.423955	8.48	0.000	22.31674	35.7384

Table A.9 – Baron & Kenny test for mediation (Step 3)

Mixed-effects ML regression Group variable: _all	Number of obs Number of groups		1450 1
	Obs per group: min avg	=	1450 1450.0 1450
Log likelihood = -1654.9941	Wald chi2(3) Prob > chi2	= =	601.87

zcomp_score	Coef.	Std. Err.	z	P> z	[95% Conf.	Interval]
Tenure_with_current_team Tenure squared	.015723	.0116248	1.35	0.176	0070612 0017588	.0385071
Off_Def	.0410039	.0016756	24.47	0.000	.0377197	.0442881
_cons	-1.330436	.0869555	-15.30	0.000	-1.500866	-1.16000

Table A.10 – Mixed-effects moderation test

Mixed-effects ML regression

Group variable: _all

Number of groups = 1

Obs per group: min = 1388
avg = 1388.0
max = 1388

Wald chi2(17) = 96.62
Log likelihood = -5364.6038

Prob > chi2 = 0.0000

Off_Def	Coef.	Std. Err.	Z	P> z	[95% Conf.	Interval]
Age	.0599863	.0933327	0.64	0.520	1229425	.242915
Tenure_with_current_team	-1.036317	.2542736	-4.08	0.000	-1.534684	5379499
Tenure_squared	.0362963	.0115418	3.14	0.002	.0136747	.0589179
Front_office_experience	.2824784	.1094454	2.58	0.010	.0679693	.4969875
Professional_playing_experience_	1195996	.122839	-0.97	0.330	3603597	.1211605
z_payroll	-1.757967	2.293478	-0.77	0.443	-6.2531	2.737167
coach_tenure	3819101	.962912	-0.40	0.692	-2.269183	1.505363
c.Age#c.z_payroll	.0011328	.0500116	0.02	0.982	0968881	.0991536
c.Tenure_with_current_team#c.z_payroll	1782973	.1376255	-1.30	0.195	4480384	.0914437
c.Tenure_squared#c.z_payroll	.004973	.0047631	1.04	0.296	0043625	.0143085
c.Front_office_experience#c.z_payroll	.0542102	.064349	0.84	0.400	0719114	.1803319
c.Professional_playing_experience_#c.z_payroll	1609639	.0723608	-2.22	0.026	3027886	0191393
c.Age#c.coach_tenure	0022115	.0212129	-0.10	0.917	0437879	.039365
<pre>c.Tenure_with_current_team#c.coach_tenure</pre>	.1313303	.0666608	1.97	0.049	.0006776	.261983
c.Tenure_squared#c.coach_tenure	0028508	.0036777	-0.78	0.438	010059	.0043573
<pre>c.Front_office_experience#c.coach_tenure</pre>	062165	.0230501	-2.70	0.007	1073424	0169875
c.Professional_playing_experience_#c.coach_tenure	.0485501	.0278504	1.74	0.081	0060357	.103136
_cons	30.98025	4.161134	7.45	0.000	22.82458	39.13592

Table A.11 – Outputs for SEM 3

Model	Path	Est. (Coef)	Robust SE	P value
3	a	.0408	.0814	.616
3	b	9259	.2046	.000
3	С	.0339	.0062	.000
3	d	.0448	.0954	.639
3	e	.0279	.0923	.763
3	f	.0334	.0032	.000
3	g	.0034	.0071	.637
3	h	.0082	.0064	.201

Table A.12 – Outputs for SEM 4

Model	Path	Est. (Coef)	Robust SE	P value
4	af	.0014	.0027	.615
4	bf	0309	.0074	.000
4	cf	.0011	.0002	.000
4	df	.0015	.0032	.640
4	ef	.0009	.0031	.763

Table A.13 – Group assignments for head coach tenure and payroll for moderation testing in SEM $\,$

Group	Head Coach Tenure (range in years)	Payroll (range in normalized z-score)
1	1 year	less than -3
2	2 years	between -3 and -2
3	3 years	between -2 and -1
4	4 years	between -1 and 0
5	5 years	between 0 and 1
6	6 years	between 1 and 2
7	7 years	between 2 and 3
8	8 years and above	greater than 3

Table A.14 – SEM head coach tenure moderation testing

					Est.	P-
Model	Path	IV	Moderator	Group	(Coef)	value
6	а	GM age	head coach tenure	1	-0.0159	0.861
6	а	GM age	head coach tenure	2	0.1086	0.313
6	а	GM age	head coach tenure	3	0.1735	0.197
6	а	GM age	head coach tenure	4	0.0485	0.757
6	а	GM age	head coach tenure	5	-0.1626	0.475
6	а	GM age	head coach tenure	6	0.257	0.362
6	а	GM age	head coach tenure	7	-0.0432	0.905
6	а	GM age	head coach tenure	8	0.0408	0.83
6	b	GM tenure	head coach tenure	1	-1.1984	0
6	b	GM tenure	head coach tenure	2	-0.6724	0.034
6	b	GM tenure	head coach tenure	3	0.4502	0.383
6	b	GM tenure	head coach tenure	4	-0.6274	0.299
6	b	GM tenure	head coach tenure	5	-1.6876	0.054
6	b	GM tenure	head coach tenure	6	-1.913	0.148
6	b	GM tenure	head coach tenure	7	2.021	0.361
6	b	GM tenure	head coach tenure	8	-0.8646	0.344
6	С	GM tenure squared	head coach tenure	1	0.0358	0
6	С	GM tenure squared	head coach tenure	2	0.0258	0.035
6	С	GM tenure squared	head coach tenure	3	-0.0193	0.415
6	С	GM tenure squared	head coach tenure	4	0.0171	0.516
6	С	GM tenure squared	head coach tenure	5	0.096	0.036
6	С	GM tenure squared	head coach tenure	6	0.1293	0.13
6	С	GM tenure squared	head coach tenure	7	-0.1834	0.334
6	С	GM tenure squared	head coach tenure	8	0.0766	0.203
6	d	GM front office experience	head coach tenure	1	0.1946	0.065
6	d	GM front office experience	head coach tenure	2	-0.0456	0.729
6	d	GM front office experience	head coach tenure	3	-0.0288	0.848
6	d	GM front office experience	head coach tenure	4	0.0602	0.739
6	d	GM front office experience	head coach tenure	5	0.1027	0.657
6	d	GM front office experience	head coach tenure	6	-0.0409	0.888
6	d	GM front office experience	head coach tenure	7	-0.0995	0.805
6	d	GM front office experience	head coach tenure	8	-0.3958	0.058
6	е	GM professional playing experience	head coach tenure	1	0.0263	0.809
6	е	GM professional playing experience	head coach tenure	2	-0.1813	0.169
6	е	GM professional playing experience	head coach tenure	3	-0.0952	0.562
6	е	GM professional playing experience	head coach tenure	4	-0.105	0.583
6	е	GM professional playing experience	head coach tenure	5	-0.386	0.096
6	е	GM professional playing experience	head coach tenure	6	0.4094	0.133
6	е	GM professional playing experience	head coach tenure	7	0.3932	0.279
6	е	GM professional playing experience	head coach tenure	8	0.888	0.001

Table A.15 – SEM team composition (payroll) moderation testing

					Est.	P-
Model	Path	IV	Moderator	Group	(Coef)	value
6	a	GM age	payroll	2	0.5006	0.048
6	а	GM age	payroll	3	-0.154	0.273
6	а	GM age	payroll	4	0.1238	0.171
6	а	GM age	payroll	5	-0.0545	0.525
6	а	GM age	payroll	6	0.1572	0.32
6	а	GM age	payroll	7	-0.3689	0.175
6	а	GM age	payroll	8	-0.0571	0.887
6	b	GM tenure	payroll	2	-0.1386	0.852
6	b	GM tenure	payroll	3	-0.5115	0.247
6	b	GM tenure	payroll	4	-0.5952	0.029
6	b	GM tenure	payroll	5	-1.0678	0
6	b	GM tenure	payroll	6	-1.2767	0.004
6	b	GM tenure	payroll	7	0.4872	0.427
6	b	GM tenure	payroll	8	-4.8157	0.171
6	С	GM tenure squared	payroll	2	0.0075	0.738
6	С	GM tenure squared	payroll	3	0.0136	0.419
6	С	GM tenure squared	payroll	4	0.0292	0.014
6	С	GM tenure squared	payroll	5	0.0348	0.005
6	С	GM tenure squared	payroll	6	0.0288	0.093
6	С	GM tenure squared	payroll	7	-0.0068	0.729
6	С	GM tenure squared	payroll	8	0.1531	0.594
6	d	GM front office experience	payroll	2	-0.2178	0.502
6	d	GM front office experience	payroll	3	0.2287	0.211
6	d	GM front office experience	payroll	4	-0.0898	0.346
6	d	GM front office experience	payroll	5	0.1089	0.263
6	d	GM front office experience	payroll	6	0.2595	0.167
6	d	GM front office experience	payroll	7	1.3577	0.001
6	d	GM front office experience	payroll	8	-0.0166	0.991
6	е	GM professional playing experience	payroll	2	1.1265	0.004
6	е	GM professional playing experience	payroll	3	-0.1056	0.594
6	е	GM professional playing experience	payroll	4	0.1113	0.257
6	е	GM professional playing experience	payroll	5	-0.0135	0.891
6	е	GM professional playing experience	payroll	6	-0.2524	0.186
6	е	GM professional playing experience	payroll	7	0.4052	0.187
6	е	GM professional playing experience	payroll	8	0.6294	0.09

Table A.16 - SEM output - moderation (head coach tenure)

Tests for group invariance of parameters

	Wald Test			Score Test		
	chi2	df	p>chi2	chi2	df	p>chi2
Structural						
Off_Def <-						
Age	3.141	7	0.8716			
Tenure_with_current_team	11.808	7	0.1071			
Tenure_squared	10.324	7	0.1709			
Front_office_experience	7.345	7	0.3939			
Professional_playing_experience_	20.483	7	0.0046			
_cons	7.492	7	0.3795	•		
Mean						
Age	9.539	7	0.2163			
Tenure_with_current_team	31.746	7	0.0000			
Tenure_squared	18.852	7	0.0087			
Front_office_experience	4.438	7	0.7282			
Professional_playing_experience_	24.754	7	0.0008	•	•	
Variance						
e.Off_Def	3.684	7	0.8154			
Age	15.313	7	0.0322			
Tenure_with_current_team	114.302	7	0.0000			
Tenure_squared	415.064	7	0.0000			
Front_office_experience	9.298	7	0.2320			
Professional_playing_experience_	44.023	7	0.0000	•		
Covariance						
Age						
Tenure_with_current_team	26.180	7	0.0005			
Tenure_squared	67.852	7	0.0000			
Front_office_experience	6.317	7	0.5033			
Professional_playing_experience_	11.712	7	0.1104	•	•	
Tenure_with_current_team						
Tenure_squared	231.734	7	0.0000			
Front_office_experience	29.640	7	0.0001			
Professional_playing_experience_	11.401	7	0.1221	•	•	
Tenure_squared						
Front_office_experience	73.424	7	0.0000			
Professional_playing_experience_	11.716	7	0.1103	•	•	
Front_office_experience						
Professional_playing_experience_	10.208	7	0.1771			

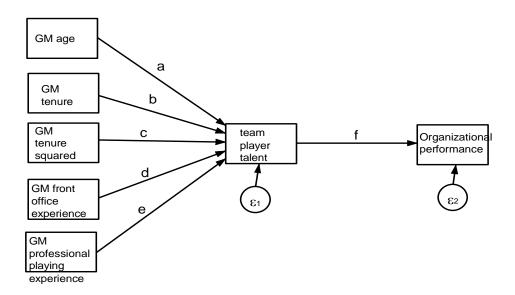
Table A.17 – SEM output - moderation (team composition (payroll))

Tests for group invariance of parameters

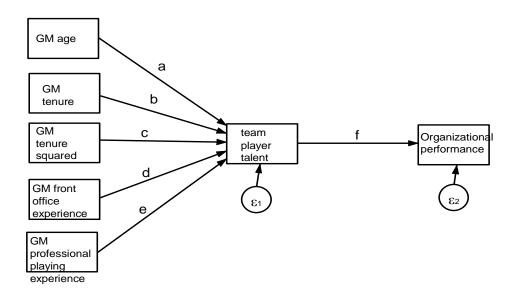
	Wald Test			Sco	ore Test	
	chi2	df	p>chi2	chi2	df	p>chi2
Structural						
Off_Def <-						
Age	10.033	6	0.1233			
Tenure_with_current_team	9.441	6	0.1503			
Tenure_squared	4.560	6	0.6013			
Front_office_experience	15.235	6	0.0185	•		
Professional_playing_experience_	15.336	6	0.0178			
_cons	10.426	6	0.1078	•		
Mean						
Age	24.802	6	0.0004			
Tenure_with_current_team	14.678	6	0.0229			
Tenure_squared	9.197	6	0.1628			
Front_office_experience	7.380	6	0.2872	•		
Professional_playing_experience_	11.246	6	0.0811	•	•	
Variance						
e.Off_Def	203.282	6	0.0000			
Age	9.676	6	0.1390			
Tenure_with_current_team	38.174	6	0.0000			
Tenure_squared	166.893	6	0.0000			
Front_office_experience	268.033	6	0.0000	•		
Professional_playing_experience_	12.128	6	0.0592	•	•	
Covariance						
Age						
Tenure_with_current_team	22.275	6	0.0011			
Tenure_squared	29.385	6	0.0001			
Front_office_experience	48.378	6	0.0000	•		
Professional_playing_experience_	5.954	6	0.4284	•	•	
Tenure_with_current_team						
Tenure_squared	72.382	6	0.0000			
Front_office_experience	46.396	6	0.0000	•		
Professional_playing_experience_	13.292	6	0.0386	•		
Tenure_squared						
Front_office_experience	80.303	6	0.0000			
Professional_playing_experience_	7.860	6	0.2486			
Front_office_experience						
Professional playing experience	5.661	6	0.4622			

Appendix B – Models

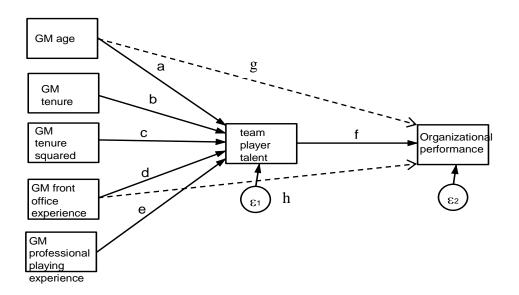
Model B.1 – Test of conceptual model to observed data for fit



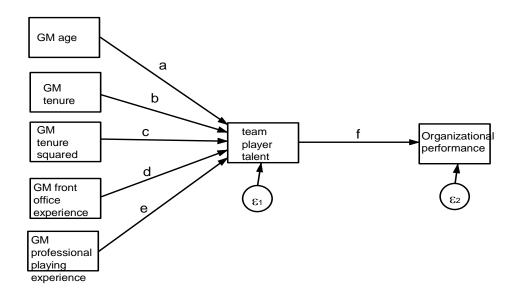
Model B.2 – Conceptual model w/ cluster variable



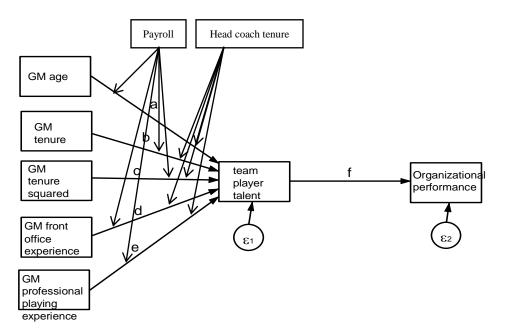
 $Model\ B.3-Conceptual\ model\ w/\ suggested\ modification\ indices$



Model B.4 – Model to test indirect effects



Model B.5 – Model to test moderation relationships



Appendix C – Stata Output

Output C.1.1 – Model 1 Log Likelihood Iterations

```
Fitting saturated model:
Iteration 0: \log likelihood = -33925.368
Iteration 1: \log likelihood = -33828.357
Iteration 2: \log \text{ likelihood} = -33819.712
Iteration 3: \log likelihood = -33819.659
Iteration 4: \log likelihood = -33819.659
Fitting baseline model:
Iteration 0: \log \text{ likelihood} = -34002.508
Iteration 1: \log likelihood = -34002.507
Fitting target model:
Iteration 0: \log likelihood = -33828.343
Iteration 1: log likelihood = -33828.343
Structural equation model
                                               Number of obs =
                                                                        1467
Estimation method = mlmv
Log likelihood = -33828.343
```

Output C.1.2 – Model 1 Coefficients

	Coef.	OIM Std. Err.	z	P> z	[95% Conf.	Interval]
tructural						
z comp score <-						
Off Def	.0335119	.0017908	18.71	0.000	.0300019	.0370218
_ _cons	-1.04247	.0602423	-17.30	0.000	-1.160543	9243978
Off Def <-						
Age	.0406579	.0530435	0.77	0.443	0633054	.1446213
Tenure_with_current_team	9257341	.1593673	-5.81	0.000	-1.238088	61338
Tenure squared	.0338657	.0065348	5.18	0.000	.0210578	.0466736
Front office experience	.045144	.0606472	0.74	0.457	0737224	.1640104
Professional playing experience	.0279149	.0629461	0.44	0.657	0954572	.151287
_cons	31.8211	2.347669	13.55	0.000	27.21975	36.42244
ın						
Age	49.64395	.2266145	219.07	0.000	49.1998	50.08811
Tenure_with_current_team	5.686625	.130295	43.64	0.000	5.431251	5.941998
Tenure_squared	57.00546	3.139253	18.16	0.000	50.85264	63.15828
Front_office_experience	10.40235	.196828	52.85	0.000	10.01658	10.78813
Professional_playing_experience_	3.691207	.1397877	26.41	0.000	3.417228	3.965186
riance						
e.Off_Def	161.8676	5.978583			150.5639	174.02
e.zcomp_score	.779803	.0287929			.7253636	.8383281
Age	72.73373	2.733322			67.56905	78.29317
Tenure_with_current_team	24.85206	.9182215			23.116	26.71851
Tenure_squared	14457.15	533.805			13447.87	15542.18
Front office experience	56.2342	2.085291			52.29209	60.47348
Professional_playing_experience_	28.66606	1.058444			26.66484	30.81748
variance						
Age						
Tenure_with_current_team	19.6403	1.22959	15.97	0.000	17.23034	22.05025
Tenure_squared	473.2884	29.55361	16.01	0.000	415.3644	531.2124
Front_office_experience	39.92315	1.987191	20.09	0.000	36.02832	43.81797
Professional_playing_experience_	2.279691	1.203498	1.89	0.058	0791226	4.638505
Tenure_with_current_team						
Tenure_squared	541.6016	21.09468	25.67	0.000	500.2568	582.9465
Front_office_experience	18.36953	1.089459	16.86	0.000	16.23423	20.50483
Professional_playing_experience_	3483804	.6972789	-0.50	0.617	-1.715022	1.018261
Tenure_squared						
Front_office_experience	421.5502	26.0114	16.21	0.000	370.5688	472.5316
Professional_playing_experience_	-18.21717	16.8145	-1.08	0.279	-51.173	14.73865
Front_office_experience						
	-3.494705	1.054865	-3.31	0.001	-5.562202	-1.427207

Output C.1.3 – Fit Assessment

Fit statistic	Value	Description
Likelihood ratio		
chi2_ms(5)	17.367	model vs. saturated
p > chi2	0.004	
chi2 bs(11)	365.696	baseline vs. saturated
p > chi2	0.000	
Population error		
RMSEA	0.041	Root mean squared error of approximation
90% CI, lower bound	0.021	
upper bound	0.063	
pclose	0.723	Probability RMSEA <= 0.05
Information criteria		
AIC	67716.685	Akaike's information criterion
BIC	67875.414	Bayesian information criterion
Baseline comparison		
CFI	0.965	Comparative fit index
TLI	0.923	Tucker-Lewis index
Size of residuals		
CD	0.023	Coefficient of determination

Output C.1.4 – Modification Indices

	MI	df	P>MI	EPC	Standard EPC
Structural					
Off_Def <-					
zcomp_score	4.527	1	0.03	-5.262417	4017319
z comp score <-					
Age	8.540	1	0.00	.0080353	.0697255
Front_office_experience	11.814	1	0.00	.0106238	.0810591
Covariance					
e.Off Def					
e.zcomp_score	4.527	1	0.03	-4.103656	365257

Output C.2.1 – Model 2 Log Likelihood Iterations

```
Fitting saturated model:
Iteration 0: log pseudolikelihood = -33925.368
Iteration 1: log pseudolikelihood = -33828.357
Iteration 2: log pseudolikelihood = -33819.712
Iteration 3: \log pseudolikelihood = -33819.659
Iteration 4: log pseudolikelihood = -33819.659
Fitting baseline model:
Iteration 0: \log pseudolikelihood = -34002.508
Iteration 1: \log pseudolikelihood = -34002.507
Fitting target model:
Iteration 0: log pseudolikelihood = -33828.343
Iteration 1: \log pseudolikelihood = -33828.343
Structural equation model
                                              Number of obs =
                                                                      1467
Estimation method = mlmv
Log pseudolikelihood= -33828.343
```

Output C.2.1 – Model 2 Coefficients

	Coef.	Robust Std. Err.	z	P> z	[95% Conf.	Interval
Structural						
z comp score <-						
Off Def	.0335119	.0032702	10.25	0.000	.0271024	.039921
_cons	-1.04247	.1082723	-9.63	0.000	-1.25468	830260
Off Def <-						
_ Age	.0406579	.0816543	0.50	0.619	1193816	.200697
Tenure with current team	9257341	.2045697	-4.53	0.000	-1.326683	52478
Tenure squared	.0338657	.0061879	5.47	0.000	.0217376	.045993
Front office experience	.045144	.0954504	0.47	0.636	1419354	.232223
Professional playing experience	.0279149	.0922401	0.30	0.762	1528723	.208702
_cons	31.8211	3.653158	8.71	0.000	24.66104	38.9811
Mean						
Age	49.64395	.5775589	85.95	0.000	48.51196	50.7759
Tenure_with_current_team	5.686625	.3446659	16.50	0.000	5.011092	6.36215
Tenure_squared	57.00546	9.542924	5.97	0.000	38.30167	75.7092
Front_office_experience	10.40235	.4960178	20.97	0.000	9.430174	11.3745
Professional_playing_experience_	3.691207	.3583327	10.30	0.000	2.988888	4.39352
Variance						
e.Off_Def	161.8676	6.380233			149.8334	174.868
e.zcomp_score	.779803	.0715588			.6514397	.933459
Age	72.73373	7.252731			59.82149	88.4330
Tenure_with_current_team	24.85206	6.048184			15.42438	40.0421
Tenure_squared	14457.15	7990.222			4893.707	42709.7
Front_office_experience	56.2342	6.832235			44.31827	71.3539
Professional_playing_experience_	28.66606	2.502051			24.15866	34.0144
Covariance						
Age Tenure with current team	19.6403	6.120763	3.21	0.001	7.643821	31.6367
Tenure squared	473.2884	211.2134	2.24	0.025	59.31781	887.25
Front office experience	39.92315	6.097933	6.55	0.000	27.97142	51.8748
Professional_playing_experience_	2.279691	2.86837	0.79	0.427	-3.342211	7.90159
Tenure with current team						
Tenure squared	541.6016	217.0092	2.50	0.013	116.2715	966.931
Front office experience	18.36953	5.187809	3.54	0.000	8.201615	28.5374
Professional_playing_experience_	3483804	1.761841	-0.20	0.843	-3.801526	3.10476
Tenure_squared						
Front_office_experience	421.5502	179.2127	2.35	0.019	70.29972	772.800
Professional_playing_experience_	-18.21717	43.20698	-0.42	0.673	-102.9013	66.4669
Front_office_experience						
Professional playing experience	-3.494705	2.435081	-1.44	0.151	-8.267377	1.27796

Output $C.2.3 - Model\ 2$ Residuals

Fit statistic	Value	Description	
Size of residuals	0.023	Coefficient of determination	
Note: SRMR is notrepor	rted because o	of missing values.	

Output C.2.4 – Model 2 Modification Indices:

	MI	df	P>MI	EPC	Standard EPC
Structural					
zcomp_score <- Front office experience	5.444	1	0.02	.0106238	.0810591

Output C.3.1 – Model 3 Log Likelihood (Model 2 plus suggested modification indices)

```
Fitting saturated model:
Iteration 0: log pseudolikelihood = -33925.368
Iteration 1: log pseudolikelihood = -33828.357
Iteration 2: log pseudolikelihood = -33819.712
Iteration 3: log pseudolikelihood = -33819.659
Iteration 4: log pseudolikelihood = -33819.659
Fitting baseline model:
Iteration 0: \log pseudolikelihood = -34002.508
Iteration 1: \log pseudolikelihood = -34002.507
Fitting target model:
Iteration 0: log pseudolikelihood = -33821.991
Iteration 1: log pseudolikelihood = -33821.991
Structural equation model
                                              Number of obs =
                                                                       1467
Estimation method = mlmv
Log pseudolikelihood= -33821.991
```

Output C.3.2 – Model 3 Coefficients

		Robust				
	Coef.	Std. Err.	Z	P> z	[95% Conf.	<pre>Interval]</pre>
tructural						
zcomp_score <-						
Off_Def	.0333923	.0032206	10.37	0.000	.0270801	.0397045
Age	.0033712	.0071418	0.47	0.637	0106265	.017369
Front_office_experience	.0081516	.0063798	1.28	0.201	0043526	.0206558
_cons	-1.290892	.3723029	-3.47	0.001	-2.020593	5611922
Off_Def <-						
Age	.0408402	.0814483	0.50	0.616	1187956	.200476
Tenure_with_current_team	9258586	.2045747	-4.53	0.000	-1.326818	5248995
Tenure_squared	.0338736	.0061875	5.47	0.000	.0217464	.0460009
Front_office_experience	.0448172	.0954422	0.47	0.639	1422461	.2318806
Professional_playing_experience_	.0278601	.0922613	0.30	0.763	1529688	.2086889
_cons	31.81595	3.642668	8.73	0.000	24.67645	38.95545
lean						
Age	49.64221	.5773817	85.98	0.000	48.51056	50.77385
Tenure_with_current_team	5.686514	.3446452	16.50	0.000	5.011021	6.362006
Tenure_squared	57.00545	9.542922	5.97	0.000	38.30167	75.70924
Front_office_experience	10.40063	.4959212	20.97	0.000	9.428641	11.37262
Professional_playing_experience_	3.691207	.3583327	10.30	0.000	2.988887	4.393526
ariance						
e.Off_Def	161.8663	6.380314			149.832	174.8672
e.zcomp_score	.7730464	.0723567			.6434778	.9287045
Age	72.75291	7.25115			59.8429	88.44801
Tenure_with_current_team	24.85259	6.048355			15.42466	40.04312
Tenure_squared	14457.15	7990.223			4893.707	42709.79
Front_office_experience	56.23756	6.832301			44.32146	71.35739
Professional_playing_experience_	28.66606	2.502051			24.15866	34.01443
Covariance						
Age						
Tenure_with_current_team	19.64617	6.121096	3.21	0.001	7.649044	31.6433
Tenure_squared	473.4018	211.2315	2.24	0.025	59.39564	887.4079
Front_office_experience	39.94033	6.098663	6.55	0.000	27.98717	51.89349
Professional_playing_experience_	2.284829	2.868593	0.80	0.426	-3.33751	7.907168
Tenure_with_current_team						
Tenure_squared	541.608	217.012	2.50	0.013	116.2723	966.9437
Front_office_experience	18.37285	5.188097	3.54	0.000	8.204364	28.54133
Professional_playing_experience_	3479699	1.761794	-0.20	0.843	-3.801022	3.105082
Tenure_squared						
Front_office_experience	421.6452	179.2308	2.35	0.019	70.35919	772.9312
Professional_playing_experience_	-18.21714	43.20697	-0.42	0.673	-102.9012	66.46696
Front_office_experience						
Professional playing experience	-3.488345					

Output C.3.3 – Model 3 Residuals

Fit statistic	Value	Description
Size of residuals	0.032	Coefficient of determination
Note: model was fit will Note: SRMR is notreport	,	er); only stats(residuals) valid. of missing values.

Output C.4 - Computing estimates of effects based on previous model

Direct effects		d Emm - 1'	a+ad *-	201 -1		1t- \
	(St	d. Err. adju	sted for	321 clus	ters in teamg	m_cluster
	Coef.	Robust Std. Err.	Z	P> z	[95% Conf.	Interval
Structural						
Off Def <-	l					
Age	.0408402	.0814483	0.50	0.616	1187956	.20047
Tenure with current team	9258586	.2045747	-4.53	0.000	-1.326818	524899
Tenure squared	.0338736	.0061875	5.47	0.000	.0217464	.046000
Front office experience	.0448172	.0954422	0.47	0.639	1422461	.231880
Professional_playing_experience_	.0278601	.0922613	0.30	0.763	1529688	.208688
z comp score <-						
Off Def	.0333923	.0032206	10.37	0.000	.0270801	.039704
Age	.0033712	.0071418	0.47	0.637	0106265	.01736
- 1			0.47	0.037	0100203	.01/30
Tenure_with_current_team	0	(no path)				
Tenure_squared	0	(no path)				
Front_office_experience	.0081516	.0063798	1.28	0.201	0043526	.020655
Professional_playing_experience_	0	(no path)				
Indirect effects						
	(St	d. Err. adju	sted for	321 clus	ters in teamg	m_cluster
		Robust				
	Coef.	Std. Err.	Z	P> z	[95% Conf.	Interval
Structural						
Off Def <-	I					
Age	0	(no path)				
Tenure with current team	0	(no path)				
Tenure squared		(no path)				
Front office experience	0	(no path)				
Professional playing experience	0	(no path)				
zcomp_score <-						
Off_Def		(no path)				
Age	.0013638	.0027092	0.50	0.615	0039462	.006673
Tenure_with_current_team	0309166	.0074479	-4.15	0.000	0455143	016318
Tenure_squared	.0011311	.000238	4.75	0.000	.0006647	.001597
Front_office_experience	.0014966	.0032012	0.47	0.640	0047778	.007770
Professional_playing_experience_	.0009303	.0030867	0.30	0.763	0051194	.0069
Total effects						
	(St	d. Err. adju	sted for	321 clus	ters in teamg	m_cluster
	05	Robust		D> 1 - 1	10E0 G6	T-+1
	Coef.	Std. Err.	z	P> z	[95% Conf.	Interval
Off_Def <-	0400400	0014402	0.50	0.616	1107056	20047
Off_Def <- Age	.0408402	.0814483	0.50	0.616	1187956	
Off_Def <- Age Tenure_with_current_team	9258586	.2045747	-4.53	0.000	-1.326818	524899
Off_Def <- Age Tenure_with_current_team Tenure_squared	9258586 .0338736	.2045747	-4.53 5.47	0.000	-1.326818 .0217464	524899 .046000
Off_Def <- Age Tenure_with_current_team Tenure_squared Front_office_experience	9258586 .0338736 .0448172	.2045747 .0061875 .0954422	-4.53 5.47 0.47	0.000 0.000 0.639	-1.326818 .0217464 1422461	524899 .046000 .231880
Off_Def <- Age Tenure_with_current_team Tenure_squared	9258586 .0338736	.2045747	-4.53 5.47	0.000	-1.326818 .0217464	.20047 524899 .046000 .231880 .208688
Off_Def <- Age Tenure_with_current_team Tenure_squared Front_office_experience	9258586 .0338736 .0448172	.2045747 .0061875 .0954422	-4.53 5.47 0.47	0.000 0.000 0.639	-1.326818 .0217464 1422461	524899 .046000 .231880
Off_Def <- Age Tenure_with_current_team Tenure_squared Front_office_experience Professional_playing_experience_	9258586 .0338736 .0448172	.2045747 .0061875 .0954422	-4.53 5.47 0.47	0.000 0.000 0.639	-1.326818 .0217464 1422461	524899 .046000 .231880 .208688
Off_Def <- Age Tenure_with_current_team Tenure_squared Front_office_experience Professional_playing_experience_ zcomp_score <-	9258586 .0338736 .0448172 .0278601	.2045747 .0061875 .0954422 .0922613	-4.53 5.47 0.47 0.30	0.000 0.000 0.639 0.763	-1.326818 .0217464 1422461 1529688	524899 .046000 .231880 .208688
Off_Def <- Age Tenure_with_current_team Tenure_squared Front_office_experience Professional_playing_experience_ zcomp_score <- Off_Def Age	9258586 .0338736 .0448172 .0278601	.2045747 .0061875 .0954422 .0922613	-4.53 5.47 0.47 0.30	0.000 0.000 0.639 0.763	-1.326818 .0217464 1422461 1529688	524899 .046000 .231880 .208688 .039704 .01824
Age Tenure_with_current_team Tenure_squared Front_office_experience Professional_playing_experience_ zcomp_score <- Off_Def	9258586 .0338736 .0448172 .0278601	.2045747 .0061875 .0954422 .0922613 .0032206 .006892	-4.53 5.47 0.47 0.30	0.000 0.000 0.639 0.763	-1.326818 .0217464 1422461 1529688 .0270801 0087731	524899 .046000 .231880
Off_Def <- Age Tenure_with_current_team Tenure_squared Front_office_experience Professional_playing_experience_ zcomp_score <- Off_Def Age Tenure_with_current_team	9258586 .0338736 .0448172 .0278601 .0333923 .004735 0309166	.2045747 .0061875 .0954422 .0922613 .0032206 .006892 .0074479	-4.53 5.47 0.47 0.30	0.000 0.000 0.639 0.763 0.000 0.492 0.000	-1.326818 .0217464 1422461 1529688 .0270801 0087731 0455143	524899 .046000 .231880 .208688 .039704 .01824 016318

Output C.5 – SEM to test hypothesized direct relationships

Structural equation model	Nur	mber of obs	=	1467		
Estimation method = mlmv						
Log pseudolikelihood= -30085.532						
	(Sto	d. Err. adju	sted for	321 clus	ters in teams	m cluster
	Coof	Robust	_	D> 1 = 1	IOE® Conf	To be owned 1
	Coef.	Std. Err.	z	P> z	[95% Conf.	Incerval
Structural						
zcomp_score <-						
Tenure_with_current_team	0606902	.0136714	-4.44	0.000	0874857	033894
Tenure_squared	.0019693	.0004111	4.79	0.000	.0011635	.002775
Age	.0093629	.0054629	1.71	0.087	0013443	.020070
Front_office_experience	.0072442	.0065469	1.11	0.269	0055875	.02007
z_payroll	.3975936	.0480598	8.27	0.000	.303398	.491789
Professional_playing_experience_	.006006	.0062537	0.96	0.337	0062512	.018263
_cons	3307736	.2339716	-1.41	0.157	7893495	.127802
Mean						
Tenure_with_current_team	5.688374	.3448721	16.49	0.000	5.012437	6.36431
Tenure_squared	57.00545	9.542922	5.97	0.000	38.30167	75.7092
Age	49.64112	.5779477	85.89	0.000	48.50836	50.7738
Front_office_experience	10.40159	.4958951	20.98	0.000	9.429651	11.3735
z_payroll	.0011569	.0493205	0.02	0.981	0955095	.097823
Professional_playing_experience_	3.691207	.3583327	10.30	0.000	2.988887	4.39352
Variance						
e.z comp score	.7931386	.0524512			.6967197	.902900
Tenure with current team	24.84398	6.046188			15.4194	40.0290
Tenure squared	14457.15	7990.223			4893.707	42709.7
Age	72.71031	7.246722			59.80816	88.3957
Front office experience	56.23392	6.832626			44.3174	71.3546
z payroll	.9783204	.0836418			.8273845	1.15679
Professional_playing_experience_	28.66606	2.502051			24.15866	34.0144
Covariance						
Tenure_with_current_team	541.502	216.9721	2.50	0.013	116.2445	966.759
Tenure_squared Aqe	19.63592	6.1192	3.21	0.013	7.642513	31.6293
Front office experience	18.36891	5.187201	3.54	0.001	8.20218	28.5356
z payroll	.2314492	.1910631	1.21	0.226	1430276	.60592
Professional playing experience	3548354	1.76243	-0.20	0.840	-3.809135	3.09946
Tenure_squared	472 204	211 215	0.04	0.005	E0 35000	007.000
Age	473.3247	211.215	2.24	0.025	59.35088	887.298
Front_office_experience z payroll	421.5896 2.473933	179.2061	2.35	0.019	70.35207	772.827
z_payroll Professional playing experience	-18.21713	3.77332 43.20697	0.66 -0.42	0.512	-4.921638 -102.9012	9.86950
	10.21/13		V.12			
Age						
Front_office_experience	39.90063	6.099479	6.54	0.000	27.94587	51.8553
z_payroll	1575034	.4690304	-0.34		-1.076786	.761779
Professional_playing_experience_	2.290587	2.870799	0.80	0.425	-3.336077	7.9172
Front_office_experience						
z_payroll	.4078541	.2823417	1.44	0.149	1455255	.961233
Professional_playing_experience_	-3.491885	2.434976	-1.43	0.152	-8.26435	1.28058
z nauroll						
z_payroll Professional playing experience	0905998	.2418563	-0.37	0.708	5646294	.383429
rroressrougr_bralind_exberreuge_	.0,00,000	. 4710000	0.3/	0.700	. 5040254	.000429

Output C.6.1 – SEM to test head coach tenure as moderator

Structural equation model Number of obs = 1467
Grouping variable = coachten_group Number of groups = 8
Estimation method = mlmv
Log likelihood = -31445.494

	06	OIM		D> 1 - 1	1050 06	T-+11
	Coef.	Std. Err.	z	P> Z	[95% Conf.	Interval
Structural						
Off_Def <-						
Age						
[*]	.0426795	.0532122	0.80	0.423	0616145	.1469734
Tenure_with_current_team						
[*]	9256183	.1610472	-5.75	0.000	-1.241265	6099716
Tenure_squared						
[*]	.0339075	.0065953	5.14	0.000	.0209809	.0468341
Front_office_experience						
[*]	.0444779	.0606972	0.73	0.464	0744865	.1634422
Professional_playing_experience_						
[*]	.0215065	.0638195	0.34	0.736	1035774	.1465905
_cons						
[*]	31.71047	2.35595	13.46	0.000	27.09289	36.32805

Output C.6.2-SEM to test head coach tenure as moderator (additional coef.)

Structural equation model	Nui	mber of obs	=	1467		
Grouping variable = coachten group	Nui	mber of grou	ps =	8		
Estimation method = mlmv						
Log likelihood = -31392.04						
	T					
		OIM				
	Coef.	Std. Err.	Z	P> z	[95% Conf.	Interval]
Structural						
Off Def <-						
Age						
1 1	0159053	.0905523	-0.18	0.861	1933845	.1615739
2	.108631	.1077757	1.01	0.313	1026054	.3198674
3	.1735399	.1346333	1.29	0.197	0903365	.4374164
4	.0485007	.1570616	0.31	0.757	2593343	.3563357
5	162562	.2277996	-0.71	0.475	6090411	.283917
6	.2569526	.2818439	0.91	0.362	2954513	.8093564
7	043155	.3621851	-0.12	0.905	7530248	.6667148
8	.0407789	.1904165	0.21	0.830	3324307	.4139885
Tenure_with_current_team						
1	-1.198434	.260392	-4.60	0.000	-1.708793	6880747
2	6723655	.3168889	-2.12	0.034	-1.293456	0512746
3	.450167	.5158389	0.87	0.383	5608587	1.461193
4	6274436	.6042672	-1.04	0.299	-1.811786	.5568985
5	-1.687574	.8762784	-1.93		-3.405048	.0299006
6	-1.913459	1.323647	-1.45	0.148	-4.507759	.6808407
7	2.020938	2.212414	0.91	0.361	-2.315314	6.357191
8	8646081	.9144514	-0.95	0.344	-2.6569	.9276838
Tenure_squared	025016	000014	2 (5	0 000	0165000	0550510
1 2	.035816	.009814	3.65	0.000	.0165809	.0550512
3	0192986	.0122244	2.11	0.035	.0018712	.0497898
4	.0171098	.0263208	0.65	0.415	0344781	.0686977
5	.0960191	.0458021	2.10	0.036	.0062487	.1857895
6	.1292587	.0853471	1.51	0.130	0380185	.2965359
7	1833757	.1896273	-0.97	0.334	5550384	.1882869
8	.0765896	.0601816	1.27	0.203	0413642	.1945434
Front office experience						
1	.1946293	.1056245	1.84	0.065	0123909	.4016495
2	0455645	.1317111	-0.35	0.729	3037135	.2125845
3	0288141	.1505062	-0.19	0.848	3238009	.2661726
4	.0601537	.1806384	0.33	0.739	2938912	.4141985
5	.1026987	.2312313	0.44	0.657	3505064	.5559038
6	0409445	.2895407	-0.14	0.888	6084339	.5265449
7	099506	.4020657	-0.25	0.805	8875402	.6885283
8	3957582	.2090178	-1.89	0.058	8054255	.013909
Professional_playing_experience_						
1	.0262951	.1088397	0.24	0.809	1870269	.239617
2	1812752	.1318091	-1.38	0.169	4396162	.0770658
3	0952192	.1643055	-0.58	0.562	4172521	.2268136
4	104995	.1911361	-0.55	0.583	4796149	.269625
5	3859851 .4093714	.2317255	-1.67	0.096	8401588	.0681886 .9429865
6 7	.3931569	.3632603	1.50	0.133 0.279	1242438 3188203	1.105134
8	.8879668	.2597274	3.42	0.279	.3789104	1.105134
cons	.0079000	.2331213	J.72	0.001	.0,00104	1.00,020
	37.2479	4.071685	9.15	0.000	29.26754	45.22826
2	30.53577	4.753004	6.42	0.000	21.22006	39.85149
3	20.76438	6.07063	3.42	0.001	8.866167	32.6626
4	28.52994	6.833108	4.18	0.000	15.1373	41.92259
5	41.18269	9.510734	4.33	0.000	22.542	59.82339
6	20.37675	12.13923	1.68	0.093	-3.415708	44.1692
7	26.77512	16.93108	1.58	0.114	-6.409186	59.95944
8	26.98595	9.463637	2.85	0.004	8.437565	45.53434

Output C.7.1 - SEM to test team composition (payroll) as moderator

Structural equation model Number of obs = 1467
Grouping variable = payroll_group Number of groups = 7
Estimation method = mlmv
Log likelihood = -31672.236

			OIM				
		Coef.	Std. Err.	Z	P> z	[95% Conf.	Interval]
Structural							
Off_Def <-							
Age							
	[*]	.0578916	.0521717	1.11	0.267	0443631	.1601462
Tenure_with_current_team							
	[*]	9648345	.1599483	-6.03	0.000	-1.278327	6513415
Tenure_squared							
	[*]	.0353345	.0065123	5.43	0.000	.0225706	.0480983
Front_office_experience							
	[*]	.0408482	.0600759	0.68	0.497	0768983	.1585948
Professional_playing_exper	ience_						
	[*]	.0395555	.062643	0.63	0.528	0832226	.1623336
cons							
	[*]	30.80907	2.31387	13.31	0.000	26.27397	35.34417

Output C.7.2 – SEM to test team composition (payroll) as moderator (additional coef.)

cructural equation model crouping variable = payroll_group cstimation method = mlmv cog likelihood = -31583.228		mber of obs mber of grou	= ps =	1467 7		
		OIM				
	Coef.	Std. Err.	Z	P> z	[95% Conf.	Interval]
tructural						
Off_Def <-						
Age						
2	.5005949	.2533988	1.98	0.048	.0039424	.9972473
3	1540656	.1406881	-1.10	0.273	4298091	.121678
4		.0904808	1.37	0.171	0535144	.3011638
5 6	0544969	.0858032	-0.64	0.525	222668	.1136743
7	.157153 3689309	.158039 .2718372	0.99 -1.36	0.320	1525978 901722	.4669038
8	0570922	.4010527	-0.14	0.173	8431411	.7289567
Tenure with current team	.00,0022	. 1010027	0.11	0.007	.0.01111	
2	1386195	.7405601	-0.19	0.852	-1.590091	1.312852
3	5114545	.4420012	-1.16	0.247	-1.377761	.3548519
4		.2726708	-2.18	0.029	-1.129589	0607391
5	-1.067775	.2752757	-3.88	0.000	-1.607305	5282444
6	-1.276734	.4421234	-2.89	0.004	-2.14328	4101886
7	.4872241	.6136802	0.79	0.427	715567	1.690015
8	-4.815743	3.519507	-1.37	0.171	-11.71385	2.082364
Tenure_squared						
2	.0075419	.0225875	0.33	0.738	0367288	.0518125
3	.0136373	.016892	0.81	0.419	0194704	.046745
4	.0292099	.0119374	2.45	0.014	.0058131	.0526068
5	.0347583	.0123748	2.81	0.005	.0105042	.0590124
6	.0287811	.0171518	1.68	0.093	0048358	.0623979
7	0068384	.0197057	-0.35	0.729	0454609	.031784
8	.1531463	.2873675	0.53	0.594	4100836	.7163762
Front_office_experience	2177072	2241400	0 67	0.502	0531103	4175246
2 3	2177973 .2286594	.3241498	-0.67 1.25	0.302	8531192 1298854	.4175246 .5872043
3 4	0897823	.0952308	-0.94	0.211	2764312	.0968667
5	.1088551	.0972517	1.12	0.263	0817548	.2994649
6	.2594607	.1877382	1.38	0.263	1084995	.6274208
7	1.357667	.413358	3.28	0.001	.5475002	2.167834
8	0166182	1.433295	-0.01	0.991	-2.825825	2.792588
Professional playing experience				•		
	1.126515	.3892997	2.89	0.004	.3635021	1.889529
3	1055973	.1981799	-0.53	0.594	4940229	.2828282
4	.1113052	.098232	1.13	0.257	081226	.3038364
5	0135323	.09831	-0.14	0.891	2062163	.1791517
6	2524238	.1910188	-1.32	0.186	6268138	.1219662
7	.4051734	.3067746	1.32	0.187	1960938	1.006441
8	.6293798	.3706836	1.70	0.090	0971468	1.355906
_cons						
2	14.72505	12.94747	1.14	0.255	-10.65152	40.10161
3	45.65643	6.245038	7.31	0.000	33.41638	57.89648
4	28.43878	3.9094	7.27	0.000	20.77649	36.10106
5	34.39348	3.994302	8.61	0.000	26.56479	42.22216
6	22.69465	6.41284	3.54	0.000	10.12572	35.26358
7	26.80697	9.856512	2.72	0.007	7.488564	46.12538
8	53.21574	36.26961	1.47	0.142	-17.87139	124.3029

Appendix D – Key figures

Figure D.1. Illustration of an organizational field in the North American professional sport context.

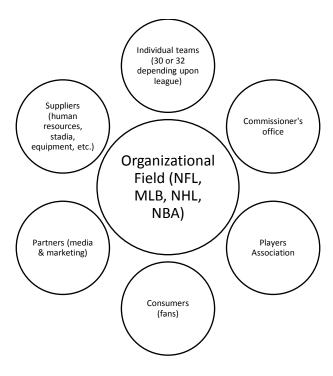


Figure D.2. Ownership logics of action

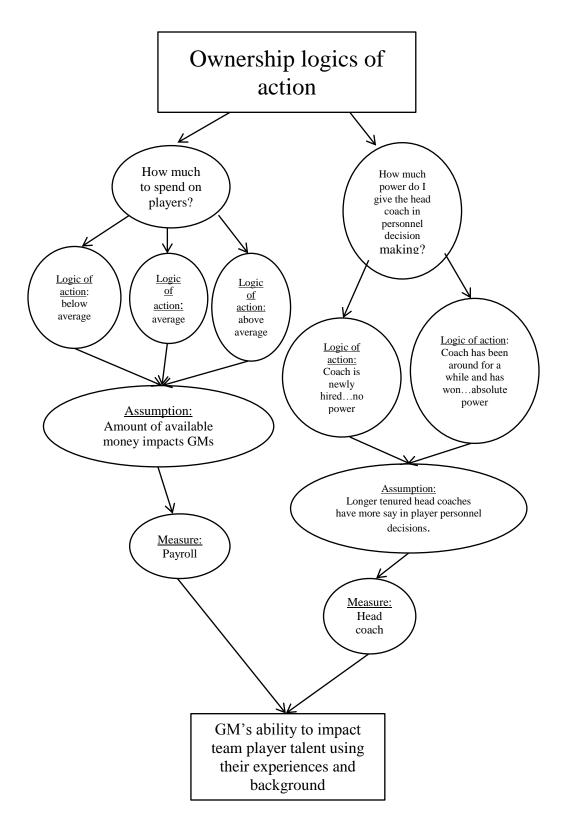


Figure D.3. Adaptation of Carpenter et al.'s (2004) upper echelons theory

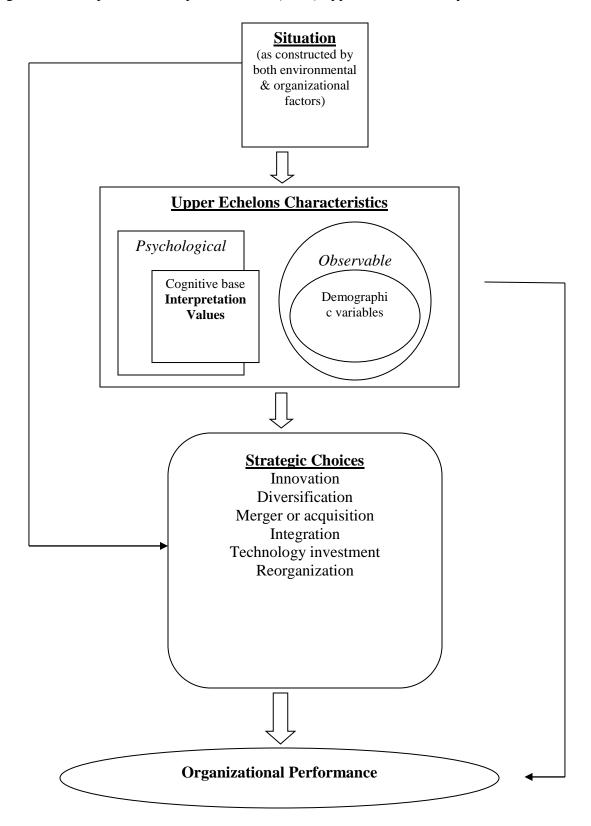


Figure D.4. A model for examining the contribution of GMs to organizational performance in the North American professional sport context

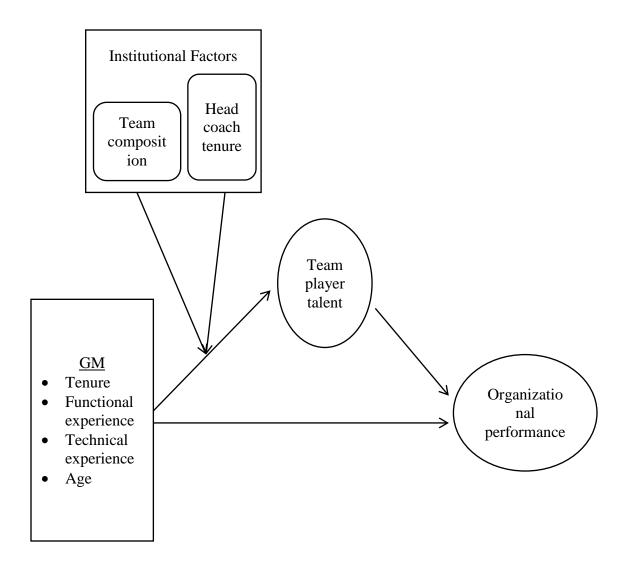


Figure D.5. Basic mediated model

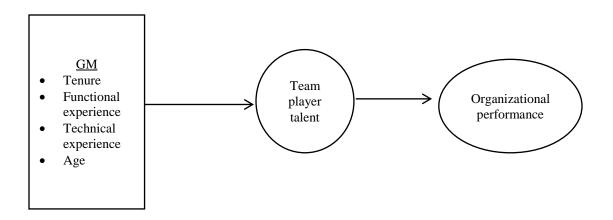


Figure D.6. Head coach tenure interactions

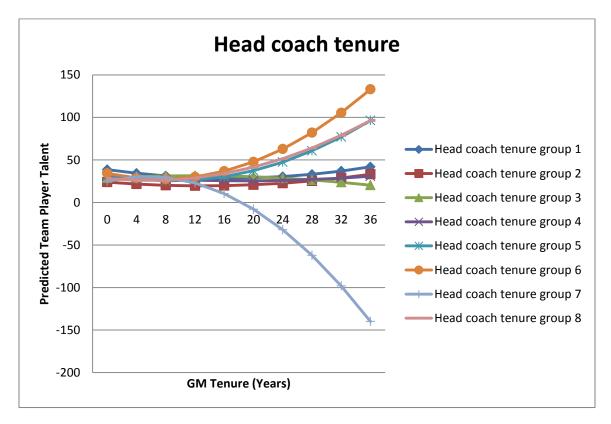


Figure D.7. Payroll interactions

