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## **Sports Settings in Management Research**

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Introduction

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## **Sports Settings in Management Research**

### **Introduction**

In recent years, scholars have increasingly engaged with the use of sports settings to advance management theory. This stream of literature departs from the ‘Sport Management’ conversation, as it aims to move beyond the appreciation of the mere empirical sport phenomenon to advance a theoretical contribution with broader generalizability to other settings. The purpose of this bibliography is to present an organized overview of some of the relevant empirical works which can act as guides to scholars interested in conducting management research using sports data. Sports settings are becoming increasingly popular among management scholars due to the large availability of fine-grained data, well-defined performance metrics, and transparency of changes in strategies and processes. Also, sports settings are considered to be relatively controlled environments, which resemble laboratory conditions. These factors make sports data particularly suitable for quantitative studies, which have been so far more common than qualitative ones. Yet sports data can also ideally suit qualitative research. For example, sporting events are incredibly well documented and often collect multiple informants’ interviews *in promptu*, thus making them excellent settings for archival, historical, and in-depth case studies. This bibliography aims to provide readers with selected examples of both excellent quantitative and qualitative studies in different sports settings. The first section of the bibliography presents some past literature reviews on how sports data has been used in management research and some suggestions on future research topics in sports settings. Following this, the bibliography summarizes the sports settings which are most popular in management research. We show that especially the various US major league sports (baseball, basketball, football, ice hockey) have been prominent settings for management research. In addition to US major sports, other popular sports settings included in this bibliography are soccer, motorsports, national sports organizations (NSOs) and the Olympics. The bibliography also includes a section on the less common sports that have been used in previous research and a section on studies examining other actors in sports than players and managers.

## Reviews

Only a few literature review papers have been published on advancing management research by using sports data. The most recent review is [Day, et al. 2012](#), and two older reviews that can be helpful are [Wolfe, et al. 2005](#) and [Keidel 1987](#).

Day, David V., Sandy Gordon, and Corinna Fink. "The Sporting Life: Exploring Organizations through the Lens of Sport." *Academy of Management Annals* 6.1 (2012): 397–433.

This review is primarily focused on literature from organizational behavior and sport science. Besides reviewing the literature, the work provides readers with some suggestions regarding future research in this field.

Keidel, Robert W. "Team Sports Models as a Generic Organizational Framework." *Human Relations* 40.9 (1987): 591–612.

This is the oldest literature review on sports studies, which summarizes some of the early works on American team sports. The article aims to identify connections between Keidel's sports-model framework and constructs from the management literature.

Wolfe, Richard A., Karl E. Weick, John M. Usher, et al. "Sport and Organizational Studies: Exploring Synergy." *Journal of Management Inquiry* 14.2 (2005): 182–210.

This article reviews management and organizational research in sport settings. In this article, the authors review the literature and describe in detail the advantages of using sports settings in management research.

## American Football

American football (from this point referred to as football) is one of the most popular team sports in the United States both at the college and professional level. Due to the large team sizes, specialized division of labor, and the strategic nature of the game, coaches in football have a substantial effect on team performance. Hence, football has been a very popular setting for studying the relationship between managerial decisions and team performance. [Brown 1982](#), the first to study this relationship in the National Football League (NFL), examines the effect of coaching changes on team performance. [Holcomb, et al. 2009](#) investigates the relationship between managerial capabilities and team performance. [Aime, et al. 2010](#) looks at how coaches moving to competitors' teams affects the focal team's performance. [To, et al. 2018](#) studies how competing against a relational rival affects the coaches' willingness to pursue riskier strategic options. Furthermore, due to football's high popularity in the United States, accurate data on coaches' employment history is widely available for researchers. For example, [Kilduff, et al. 2016](#) uses employment data to examine how coaches can gain or lose from having social ties to high-prestige head coaches. Besides being a suitable setting for managerial level studies, football has some other unique features that researchers can leverage. For example, [Carton and Rosette 2011](#) leverages in their study on college football the high prevalence of black leaders, high media exposure, and the essential role of the leading role of some players in the team (i.e., the quarterbacks).

Aime, Federico, Scott Johnson, Jason W. Ridge, and Aaron D. Hill. "The Routine May Be Stable but the Advantage Is Not: Competitive Implications of Key Employee Mobility." *Strategic Management Journal* 31.1 (2010): 75–87.

This is a quantitative study that leverages the fine-grained data on employee mobility and the well-defined performance metrics in the NFL to examine the effect of key employee mobility on an organization's competitive advantage and thus its performance. Regarding key employees, they mean coaches that have worked closely with the head coach and therefore

have a good understanding of the team's strategic innovations. In the study they use a panel dataset from the NFL.

Brown, M. Craig. "Administrative Succession and Organizational Performance: The Succession Effect." *Administrative Science Quarterly* 27.1 (1982): 1–16.

This is a quantitative study that uses a panel dataset from the NFL to investigate how coaching changes affect team performance in the NFL. Among other insights, the author argues that in the NFL coaches have a more substantial effect on team performance than players do, making it a suitable setting for studying top management teams (TMTs).

Carton, Andrew M., and Ashleigh Shelby Rosette. "Explaining Bias against Black Leaders: Integrating Theory on Information Processing and Goal-Based Stereotyping." *Academy of Management Journal* 54.6 (2011): 1141–1158.

This is a quantitative study on racial bias against leaders, in which hierarchical linear modeling is used to examine how the media evaluates black college football quarterbacks. This study shows how the high level of media coverage of college football and racial diversity in football can be used to progress management research.

Holcomb, Tim R., R. Michael Holmes Jr., and Brian L. Connelly. "Making the Most of What You Have: Managerial Ability as a Source of Resource Value Creation." *Strategic Management Journal* 30.5 (2009): 457–485.

This article uses panel data from the NFL to examine the relationship between managerial capabilities and team performance. It contributes to the resource-based view by examining how managers' capability to deploy resources, and choosing the right lineup on the field, can become a competitive advantage.

Kilduff, Martin, Craig Crossland, Wenpin Tsai, and Matthew T. Bowers. "Magnification and Correction of the Acolyte Effect: Initial Benefits and *Ex Post* Settling Up in NFL Coaching Careers." *Academy of Management Journal* 59.1 (2016): 352–375.

This quantitative study uses panel data to look at how assistant coaches can benefit from having social ties to a high-prestige head coach. The study shows how prestige can be measured and how social ties can be identified in the NFL.

To, Christopher, Gavin J. Kilduff, Lisa Ordoñez, and Maurice E. Schweitzer. "Going for It on Fourth Down: Rivalry Increases Risk Taking, Physiological Arousal, and Promotion Focus." *Academy of Management Journal* 61.4 (2018): 1281–1306.

In this quantitative study, the authors examine how rivalry triggers an individual's promotion focus and therefore increases risk taking. The authors first use panel data from the NFL to examine the relationship between rivalry and risk taking and then supplement their findings by testing with a lab experiment how an increased promotion focus mediates the relationship.

## Baseball

Baseball has been one of the most popular sport settings for management scholars, particularly the top US league, Major League Baseball (MLB). The setting has been popular among quantitative scholars for four main reasons. First, baseball is often used to answer performance-related questions. For example, Bloom [1999](#) examines how the team's pay distribution affects the players and the team's performance. Sirmon, et al. [2008](#) studies the link between managerial actions and team performance in dyadic competitions. Second, status-related questions are common in baseball thanks to the well-defined metrics for status available in MLB. All-star nominations (Kim and King [2014](#)) and player awards (Marr and Thau [2014](#)) are highly valued in baseball, and hence they function as a good measurement for status. Third, MLB presents several

studies on human capital. For example, [Crocker and Eckardt 2014](#) leverages baseball data for a multilevel study of human capital and [Moliterno and Wiersema 2007](#) studies how firms can gain a competitive advantage by divesting human resources. Finally, the game includes several different tasks that require tacit knowledge. [Shamsie and Mannor 2013](#) functions as an example of how to measure tacit knowledge. In addition, to the quantitative game-level studies on baseball, other areas of baseball can be used to advance management research. For example, [Cotton, et al. 2011](#) conducts a qualitative study on the Hall of Fame inductees' speeches. Bloom, Matt. "The Performance Effects of Pay Dispersion on Individuals and Organizations." *Academy of Management Journal* 42.1 (1999): 25–40.

This quantitative study explores the effect of pay distribution on player and organizational performance. The study uses a panel dataset from MLB and shows how performance can be measured in terms of game performance—both on a player and team level—and also in terms of the financial performance of the organization. Also, it is one of the few studies that leverage the publicly available data on player salaries.

Cotton, Richard D., Yan Shen, and Reut Livne-Tarandach. "On Becoming Extraordinary: The Content and Structure of the Developmental Networks of Major League Baseball Hall of Famers." *Academy of Management Journal* 54.1 (2011): 15–46.

This is a qualitative study on MLB Hall of Fame speeches. The authors use the inductees' speeches to examine what support and which developers the inductees identified to be most influential for their career achievements. The study is an example of how scholars can answer interesting questions by considering other areas of the sport than just the game itself.

Crocker, Alia, and Rory Eckardt. "A Multilevel Investigation of Individual-and Unit-Level Human Capital Complementarities." *Journal of Management* 40.2 (2014): 509–530.

This quantitative article illustrates how baseball can be used to answer multilevel human capital questions, as both individual and unit-level human capital can be measured in baseball. The analysis is performed using hierarchical linear modeling of Major League Baseball data.

Kim, Jerry W., and Brayden G. King. "Seeing Stars: Matthew Effects and Status Bias in Major League Baseball Umpiring." *Management Science* 60.11 (2014): 2619–2644.

In this quantitative study using panel data from the MLB, the authors examine how high-status individuals are evaluated more favorably than low-status individuals. The study shows how high status can be operationalized in the context of MLB and how researchers can leverage the players' different roles in baseball in their studies.

Marr, Jennifer Carson, and Stefan Thau. "Falling from Great (and Not-So-Great) Heights: How Initial Status Position Influences Performance after Status Loss." *Academy of Management Journal* 57.1 (2014): 223–248.

This study combines a field study in the MLB with two lab experiments to examine how the effect of a status loss on an individual's performance differ between high- and low-status individuals. The study presents possible operationalizations of status and status loss in MLB.

Moliterno, Thomas P., and Margarethe F. Wiersema. "Firm Performance, Rent Appropriation, and the Strategic Resource Divestment Capability." *Strategic Management Journal* 28.11 (2007): 1065–1087.

This quantitative study uses cross-sectional timeseries regression to explore how a firm can achieve a competitive advantage by selling its productive resources. The authors provide a discussion on how trades can be used to answer questions on divesting assets and how the players are similar to firm resources.

Shamsie, Jamal, and Michael J. Mannor. "Looking inside the Dream Team: Probing into the Contributions of Tacit Knowledge as an Organizational Resource." *Organization Science* 24.2 (2013): 513–529.

In this quantitative article, the authors use a panel dataset from the MLB to study how tacit knowledge can function as a critical resource. This study functions as an example of how tacit knowledge is present in baseball. Also, the authors highlight that because MLB teams have significantly more games during a season than in other major league US sports random factors are less likely to influence a team's win percentage in MLB.

Sirmon, David G., Steve Gove, and Michael A. Hitt. "Resource Management in Dyadic Competitive Rivalry: The Effects of Resource Bundling and Deployment." *Academy of Management Journal* 51.5 (2008): 919–935.

This quantitative article examines how managerial actions affect performance in dyadic competitions. To test their hypothesis, panel data is used from MLB. This is one of the few managerial-level studies in the context of baseball, and it shows how managerial and player skills can be operationalized in baseball.

## **Basketball**

Since Pfeffer and Davis-Blake 1986, basketball has become one of the most prominent sport settings in management research. The studies have been conducted both by using data from the top US professional league, the National Basketball Association (NBA), and at the college level from the National College Athletic Association (NCAA). Berger and Pope 2011 discusses how these two leagues differ from each other and how the settings can supplement each other. Management scholars have chosen to conduct game-level studies in basketball settings for three main reasons. First, basketball is suitable to be used in social network studies. Among others, two studies looked at the difference between status and reputation. Ertug and Castellucci 2013 examines status and reputation at an individual level, whereas Washington and Zajac 2005 studies status and reputation on an organizational level. Furthermore, Fonti and Maoret 2016 investigates the effect of social capital and an actor's position in a social network on organizational performance. Second, some of the unique features of the setting allow researchers to address some methodological issues. For example, Chen and Garg 2018 show how injuries can be used as exogenous shocks to a team's composition and Zhang 2017 on racial bias illustrates how researchers can account for differences in individuals quality and isolate the effects of such bias. Moreover, Kilduff, et al. 2010 uses external stakeholders, such as fans and sports journalists, to identify relational rivalries in the NCAA. Third, there is a high task interdependency in basketball. Hence the game is complex, and to play it successfully the players and coaches rely on their tacit knowledge. A more comprehensive discussion on tacit knowledge and the interdependency between players is provided in the study Berman, et al. 2002 on how tacit knowledge can be a source of competitive advantage, while Ethiraj and Garg 2012 examines how star players can gain more bargaining power against their team when the interdependency is asymmetric, meaning that team members who are less dependent on their teammates can strengthen their bargaining power against their team.

Berger, Jonah, and Devin Pope. "Can Losing Lead to Winning?" *Management Science* 57.5 (2011): 817–827.

In this quantitative article the authors use a regression discontinuity design to look at how "being behind" in a competition can increase a team's motivation and performance. The paper

uses both the NBA and the NCAA for the study and provides a short discussion on the differences between these two leagues.

Berman, Shawn L., Jonathan Down, and Charles W. L. Hill. "Tacit Knowledge as a Source of Competitive Advantage in the National Basketball Association." *Academy of Management Journal* 45.1 (2002): 13–31.

In this quantitative study, the authors examine how tacit knowledge can function as a competitive advantage. The analysis is conducted using a pooled time series model on a panel dataset on NBA teams. The study provides an extensive discussion on tacit knowledge in basketball and how there is a high interdependency between players.

Chen, John S., and Pranav Garg. "Dancing with the Stars: Benefits of a Star Employee's Temporary Absence for Organizational Performance." *Strategic Management Journal* 39.5 (2018): 1239–1267.

In this quantitative article, the authors explore the relationship between star employees and organizational performance and how the absence of a star can trigger changes in organizational routines that improve organizational performance. To test their hypotheses they use a panel dataset on NBA games. The authors lay out a comprehensive list of variables that affect organizational performance and shows how injuries can be used as an exogenous shock.

Ertug, Gokhan, and Fabrizio Castellucci. "Getting What You Need: How Reputation and Status Affect Team Performance, Hiring, and Salaries in the NBA." *Academy of Management Journal* 56.2 (2013): 407–431.

In this quantitative article, the authors test empirically, with a panel dataset from the NBA, how reputation and status differ from each other. In this study, status is measured on an individual level. Also, it is an example of how the game and financial data can be combined to examine performance from different aspects.

Ethiraj, Sendil K., and Pranav Garg. "The Division of Gains from Complementarities in Human-Capital-Intensive Activity." *Organization Science* 23.3 (2012): 725–742.

This quantitative study examines the impact of organization design on a player's bargaining power against their team using panel data from the NBA. The authors argue that players who are less dependent on other players will have disproportionately more bargaining power than their teammates. The study shows how interdependency between players can be measured.

Fonti, Fabio, and Massimo Maoret. "The Direct and Indirect Effects of Core and Peripheral Social Capital on Organizational Performance." *Strategic Management Journal* 37.8 (2016): 1765–1786.

This quantitative article uses panel data from the NBA to explore how social capital affects organizational performance and how this relationship is affected by the actor's position in the network. The study elaborates on how a player's network position can be operationalized in basketball.

Kilduff, Gavin J., Hillary Anger Elfenbein, and Barry M. Staw. "The Psychology of Rivalry: A Relationally Dependent Analysis of Competition." *Academy of Management Journal* 53.5 (2010): 943–969.

This quantitative study examines how rivalries are formed and how rivalries affect performance, using a combination of a panel dataset from NCAA and a series of experiments. The article shows how researchers can use multiple stakeholders—in this case the audience, sports journalists, and players—to examine a phenomenon in a sports setting. Also, the authors discuss how results attained from studies in sports settings are constrained by the idiosyncrasies of the setting.

Pfeffer, Jeffrey, and Alison Davis-Blake. "Administrative Succession and Organizational Performance: How Administrator Experience Mediates the Succession Effect." *Academy of Management Journal* 29.1 (1986): 72–83.

This is one of the first studies in basketball. In this quantitative article, the authors use a generalized linear squares model to examine when changing the team's manager results in improved performance.

Washington, Marvin, and Edward J. Zajac. "Status Evolution and Competition: Theory and Evidence." *Academy of Management Journal* 48.2 (2005): 282–296.

In this quantitative article, the authors use panel data from the NCAA basketball tournament to examine how organizational status evolves and how firms can benefit from status differences. The paper provides an operationalization of status at the organizational level.

Zhang, Letian. "A Fair Game? Racial Bias and Repeated Interaction between NBA Coaches and Players." *Administrative Science Quarterly* 62.4 (2017): 603–625.

This quantitative study examines how repeated interaction moderates the effects of racial bias. In the study the author uses a panel dataset from the NBA to predict players' playing times. The paper shows how researchers can deal with unobserved individual heterogeneity by using basketball as their research setting.

## Ice Hockey

Compared to other major US sports ice hockey has been a less popular setting for management scholars. However, ice hockey has some unique characteristics that researchers have leveraged in their studies. First, it is considered to be one of the more physical major sports in the United States. Aggressive behavior in form of body checks and fights occur often during the games and hence hockey is a suitable setting for competitive aggressiveness. Russell 1974 used the aggressive nature of the game to study the relationship between performance and aggression and later Grohsjean, et al. 2016 examined players' aggressiveness toward former employers and teammates in the National Hockey League (NHL). Second, besides being an aggressive sport, in ice hockey players have specialized roles and high task interdependency. Specialized roles include goaltenders and enforcers, players whose primary task is to defend teammates by breaking the rules. For example, Stuart and Moore 2017 uses enforcers to study the implications of illicit roles on team performance. In addition, a team's success is highly dependent on players' ability to collaborate, making hockey suitable for studying factors affecting performance in settings characterized by high task-interdependency. Trevor, et al. 2012 leverages this aspect to examine the effect of pay dispersion on the performance of interdependent work. Another study on interdependent work is Stuart 2017, examining how the exit of a key team member affects the way an action team reorganizes its interdependent relationships. Finally, the NHL, the top league in hockey, provides accurate play level data, making it an excellent setting for larger-scale quantitative studies (see for example Grohsjean, et al. 2016 and Stuart 2017).

Grohsjean, Thorsten, Pascal Kober, and Leon Zucchini. "Coming Back to Edmonton: Competing with Former Employers and Colleagues." *Academy of Management Journal* 59.2 (2016): 394–413.

This quantitative study looks at players' competitive aggressiveness against former employers and team members. The authors demonstrate how game-level data from the NHL can be used to conduct large scale studies (N>100,000) and how aggressive behavior can be operationalized in ice hockey.

Russell, Gordon W. “Machiavellianism, Locus of Control, Aggression, Performance, and Precautionary Behaviour in Ice Hockey.” *Human Relations* 27.9 (1974): 825–837.

This study is the first study carried out in ice hockey. It is a quantitative study that uses minor league hockey games as a field experiment to examine the relationship between players’ performance and aggression. Also, it is one of the few studies not carried out in the NHL.

Stuart, H. Colleen. “Structural Disruption, Relational Experimentation, and Performance in Professional Hockey Teams: A Network Perspective on Member Change.” *Organization Science* 28.2 (2017): 283–300.

This quantitative study uses panel data from the NHL to examine how action teams reorganize their interdependent relationships following the exit of a key team member. In the article, the authors discuss the resemblance between ice hockey teams and action teams as well as using injuries as exogenous factors causing changes in the line-up.

Stuart, H. Colleen, and Celia Moore. “Shady Characters: The Implications of Illicit Organizational Roles for Resilient Team Performance.” *Academy of Management Journal* 60.5 (2017): 1963–1985.

In this quantitative study, the authors use panel data from the NHL to examine the implications of illicit roles on team performance. In the study, the authors leverage the different specialized roles in ice hockey, such as the enforcer, and they operationalize constructs such as network centrality and team performance.

Trevor, Charlie O., Greg Reilly, and Barry Gerhart. “Reconsidering Pay Dispersion’s Effect on the Performance of Interdependent Work: Reconciling Sorting and Pay Inequality.” *Academy of Management Journal* 55.3 (2012): 585–610.

This quantitative study uses a panel dataset from the NHL to examine the effect of pay dispersion on the performance of interdependent work. It is an example of a study that uses data on player salaries. Also, the article provides a discussion on why there is high task-interdependency in ice hockey.

## **Motorsports**

Different from other sports, in motorsports the drivers’ performance is dependent on their vehicles’ performance. Hence, different motorsports settings have been particularly popular for studies on innovation and technology evolution (see among others Formula One, NASCAR, and Le Mans Prototype Racing.) [Marino, et al. 2015](#) and [Aversa and Guillotin 2018](#) use Formula One and the Le Mans Prototype Racing respectively to examine how teams should focus their innovation during regulatory changes. [Hoisl, et al. 2017](#) studies innovation in the context of Formula One, examining the link between R&D team composition and performance in hypercompetitive markets. Formula One has also been used for studies on technology evolution. [Castellucci and Ertug 2010](#) examines how Formula One teams’ performance is affected by their choice between high- and low-status suppliers. [Jenkins and Floyd 2001](#) investigates dominant designs in Formula One and how specific evolutionary forces resulted in the dominant designs’ emergence and survival. A second study on technology evolution is conducted in [Jenkins 2010](#), in which the author examines technological discontinuities and competitive advantages in Formula One over a fifty-seven-year period. Besides its theoretical contribution, the article also provides a good overview of how technology has evolved in Formula One. In addition to motorsports being a prominent setting for studies on innovation and technology, several studies on tournaments have been conducted in motorsports settings. Particularly, the National Association for Stock Car Auto Racing (NASCAR) is often used as the setting for studies on

tournaments. The first study was conducted by [Becker and Huselid 1992](#), in which they investigate the incentive effects of tournament compensation systems. Later [Bothner, et al. 2007](#) studies the relationship between competitive crowding and risk-taking in NASCAR. Finally, motorsports have been used to examine the link between performance and business strategy. [Aversa, et al. 2015](#) examines the relationship in Formula One between business models and performance using qualitative comparative analysis (QCA).

Aversa, Paolo, Santi Furnari, and Stefan Haefliger. "Business Model Configurations and Performance: A Qualitative Comparative Analysis in Formula One Racing, 2005–2013." *Industrial and Corporate Change* 24.3 (2015): 655–676.

This qualitative article explores the relationship between business model configurations and performance in Formula One. It is the first study to use qualitative comparative analysis (QCA) in a motorsports setting, and it is one of the few studies that connect business strategy (e.g., business model configurations) with race performance.

Aversa, Paolo, and Olivier Guillotin. "Firm Technological Responses to Regulatory Changes: A Longitudinal Study in the Le Mans Prototype Racing." *Research Policy* 47.9 (2018): 1655–1673.

This is the only study conducted in Le Mans prototype racing. It is a longitudinal comparative case study that examines how firms should focus their innovation efforts during permissive or restrictive regulatory changes.

Becker, Brian E., and Mark A. Huselid. "The Incentive Effects of Tournament Compensation Systems." In *Special Issue: Process and Outcome: Perspectives on the Distribution of Rewards in Organizations*. Edited by J. N. Baron and K. S. Cook. *Administrative Science Quarterly* 37.2 (1992): 336–350.

This quantitative study is one of the first in motorsports published in a top journal. The article looks at the incentive effects of tournament models using panel data from NASCAR.

Bothner, Matthew S., Jeong-han Kang, and Toby E. Stuart. "Competitive Crowding and Risk Taking in a Tournament: Evidence from NASCAR Racing." *Administrative Science Quarterly* 52.2 (2007): 208–247.

This quantitative article uses panel data on NASCAR races to examine the relationship between competitive crowding and risk taking in a competition structured as a tournament. It provides researchers with a list of potential variables that can be used in future studies.

Castellucci, Fabrizio, and Gokhan Ertug. "What's in It for Them? Advantages of Higher-Status Partners in Exchange Relationships." *Academy of Management Journal* 53.1 (2010): 149–166.

In this quantitative study the authors use event history techniques to look at the performance implications in choosing between low- and high-status suppliers. The authors explain why Formula One is a suitable setting for research on status.

Hoisl, Karin, Marc Gruber, and Annamaria Conti. "R&D Team Diversity and Performance in Hypercompetitive Environments." *Strategic Management Journal* 38.7 (2017): 1455–1477.

This quantitative article examines the effects of an R&D team's composition on its performance outcomes in hypercompetitive markets using panel data from Formula One. The authors provide a clear description of why Formula One is a suitable setting for studies on hypercompetition and how R&D activities are organized in Formula One teams.

Jenkins, Mark. "Technological Discontinuities and Competitive Advantage: A Historical Perspective on Formula 1 Motor Racing 1950–2006." *Journal of Management Studies* 47.5 (2010): 884–910.

This qualitative paper uses a historical perspective to study the interplay between technological discontinuities and performance in Formula One. The paper discusses the significant technological changes in Formula One over a fifty-seven-year period and gives readers a good overview of how technology evolves in Formula one.

Jenkins, Mark, and Steven Floyd. "Trajectories in the Evolution of Technology: A Multi-Level Study of Competition in Formula 1 Racing." *Organization Studies* 22.6 (2001): 945–969.

This is a longitudinal case study conducted in Formula One on what are the evolutionary forces that contribute to the emergence and survival of dominant design. It was the first such study on Formula One.

Marino, Alessandro, Paolo Aversa, Luiz Mesquita, and Jaideep Anand. "Driving Performance via Exploration in Changing Environments: Evidence from Formula One Racing."

*Organization Science* 26.4 (2015): 1079–1100.

This is a study that uses both quantitative and qualitative methods to explore what is the optimum level of exploration under regulative change in the context of complex product architectures. The study shows how mixed methods studies can be conducted in Formula One and how the causal mechanism can be better isolated with mixed methods than with a single method.

## Olympics and NSOs

The Olympics and NSOs are some of the most common sport settings in management research. Unlike most other sports settings, qualitative studies are quite common in the Olympics and NSOs—by NSOs, we refer to the different sports organizations that are responsible for governing all aspects of a sport in a country (e.g., the National Collegiate Athletic Association in the United States is responsible for governing all athletics-related activities on a college level).

The first study on NSOs is conducted in [Stern 1979](#), in which the author examines the development of interorganizational control networks. Later the NSOs have been popular settings for organizational scholars. [Kikulis, et al. 1995](#) studied Canadian NSOs undergoing institutional change, while [Amis, et al. 2004](#) investigated how radical change in Canadian NSOs occurred.

[Washington and Ventresca 2004](#) examines how institutional mechanisms can support changes in organizational strategies in the context of US intercollegiate athletics and [Zavyalova, et al. 2016](#) uses US universities and the National Collegiate Athletic Association to study how an organization can benefit or accrue disadvantage from its reputation. The Olympics has been a prominent setting in management research due to its significant societal and cultural impact.

[Glynn 2008](#) studies the Olympics to understand how the Olympics as a field-configuring event impacts civic communities. [Smith, et al. 2009](#) conducts a study on the Special Olympics to investigate how the Special Olympics could cultivate knowledge sharing and understanding among the participants of the event. Finally, [Walker, et al. 2010](#) uses the 2008 Beijing Olympics to examine consumers' response to organizations' CSR initiatives.

Amis, John, Trevor Slack, and C. R. Hinings. "The Pace, Sequence, and Linearity of Radical Change." *Academy of Management Journal* 47.1 (2004): 15–39.

This is a quantitative study on how pace, sequence, and linearity of change affect the result of radical transformations. For the study, they use the whole population of Canadian NSOs, thirty-six in total, that experienced turbulent change over twelve years.

Glynn, Mary Ann. "Configuring the Field of Play: How Hosting the Olympic Games Impacts Civic Community." *Journal of Management Studies* 45.6 (2008): 1117–1146.

This qualitative article studies the Olympics as a field-configuring event and how such field configuring events create and rearrange symbolic and relational systems. The author uses two case studies to answer her research question. The article demonstrates the enormous social and cultural impact the Olympics have on communities.

Kikulis, Lisa M., Trevor Slack, and C. R. Hinings. "Sector-Specific Patterns Of Organizational Design Change." *Journal of Management Studies* 32.1 (1995): 67–100.

This qualitative article strives to understand the role of values in the process of organizational change by studying Canadian NSOs undergoing institutional change in a real-time longitudinal study. The article discusses the significant changes the Canadian NSOs underwent in the 1980s and why the Canadian NSOs are suitable for these types of research questions.

Smith, Ginger, Andrea Cahn, and Sybil Ford. "Sports Commerce and Peace: The Special Case of the Special Olympics." *Journal of Business Ethics* 89.4 (2009): 587–602.

This single case study looks at how large international sporting events, such as the Special Olympics, can contribute to change in host countries and how these events can foster greater knowledge sharing and understanding among participants on a larger scale.

Stern, Robert N. "The Development of An Interorganizational Control Network: The Case of Intercollegiate Athletics." *Administrative Science Quarterly* 24.2 (1979): 242–266.

This case study is one of the oldest articles on NSOs. In the article, the author examines the transformation of the network of organizations that participated in intercollegiate athletics.

Walker, Matthew, Bob Heere, Milena M. Parent, and Dan Drane. "Social Responsibility and the Olympic Games: The Mediating Role of Consumer Attributions." *Journal of Business Ethics* 95. 4 (2010): 659–680.

In this quantitative article, the authors use structural equation modeling to examine how consumers' perception of organizational motives mediates consumers' response to organizations' CSR initiatives. To test their hypothesis, they use data from the 2008 Beijing Olympics.

Washington, Marvin, and Marc J. Ventresca. "How Organizations Change: The Role of Institutional Support Mechanisms in the Incorporation of Higher Education Visibility Strategies, 1874–1995." *Organization Science* 15.1 (2004): 82–97.

This article examines how institutional mechanisms support changes in organizational strategies. In this quantitative study, the authors use longitudinal data from three different intercollegiate sports programs—basketball, lacrosse and ice hockey—to test their theory.

Zavyalova, Anastasiya, Michael D. Pfarrer, Rhonda K. Reger, and Timothy D. Hubbard.

"Reputation as a Benefit and a Burden? How Stakeholders' Organizational Identification Affects the Role of Reputation Following a Negative Event." *Academy of Management Journal* 59.1 (2016): 253–276.

This quantitative article uses panel data to explore how an organization's general reputation moderates the effect of a negative event on support from stakeholders in the context of US universities and the National Collegiate Athletic Association. The authors leverage the US universities' different types of stakeholders to explore their research question.

## Soccer

Soccer has been a popular setting for scholars for three main reasons. First, soccer is one of the most global sports in the world. Hence, soccer has a large global followership and plays a significant cultural role in many countries, which is why soccer events are extensively commented and recorded as suitable for qualitative studies (Elliott and Smith 2006). Also,

players not only compete for clubs but also for their national teams in large high-exposure tournaments. Miklos-Thal and Ullrich 2016 uses this aspect to examine the link between future career prospects and implicit effort incentives. Second, an area of interest for scholars has been the structure of competition in soccer. Competition has been studied both on a team level in Moliterno, et al. 2014 and on an individual level in Kocher, et al. 2012. Third, the game includes several different tactical elements such as when to break the rules and whom to choose for your line-up, making it a suitable setting for studies on decision making (Bartling, et al. 2015; Kilduff, et al. 2016). Finally, soccer is a team sport in which players particularly need to work together and hence collaboration and having a united team are crucial to succeed. Silva, et al. 2014 leverages this aspect of soccer in their study on how players experience and characterize team spirit.

Bartling, Björn, Leif Brandes, and Daniel Schunk. “Expectations as Reference Points: Field Evidence from Professional Soccer.” *Management Science* 61.11 (2015): 2646–2661.

In this quantitative study the authors use panel data to examine decision making in soccer. They are interested in two particular types of decision making—namely when players decide to break the rules of the game and which player changes the managers decide to make during the game. It is one of the few studies carried out in two different leagues, namely the German and the English top leagues.

Elliott, Dominic, and Denis Smith. “Cultural Readjustment after Crisis: Regulation and Learning from Crisis within the UK Soccer Industry.” *Journal of Management Studies* 43.2 (2006): 289–317.

This is a longitudinal case study on industry response to a crisis. The study shows how soccer can be a suitable setting for case studies due to the superb availability of data. For example, for this study, the authors collected data from reports, interviews, and observations. Also, this is one of the few industry-level studies.

Kilduff, Gavin J., Adam D. Galinsky, Edoardo Gallo, and J. James Reade. “Whatever It Takes to Win: Rivalry Increases Unethical Behavior.” *Academy of Management Journal* 59.5 (2016): 1508–1534.

This quantitative article investigates the link between relational rivalry and unethical behavior. In the study, the authors combine a study using panel data from Italian soccer with a series of experiments.

Kocher, Martin G., Marc V. Lenz, and Matthias Sutter. “Psychological Pressure in Competitive Environments: New Evidence from Randomized Natural Experiments.” *Management Science* 58.8 (2012): 1585–1591.

This quantitative study examines the impact of psychological pressure on performance in competitive environments. They use penalty shots as a randomized natural experiment to study how firms can gain a first-mover advantage by scoring first in a penalty shootout and as a result, increase the psychological pressure on the opponent.

Miklós-Thal, Jeanine, and Hannes Ullrich. “Career Prospects and Effort Incentives: Evidence from Professional Soccer.” *Management Science* 62.6 (2016): 1645–1667.

In this quantitative study, they use panel data to look at how future career prospects create implicit effort incentives. In soccer, players can choose to compete with their national team in an international tournament, and their performance in the tournament can help them progress in their career. Also, nationality is an exogenous variable, and therefore, the career prospects are randomly assigned, making soccer an ideal setting to explore their research question.

Moliterno, Thomas P., Nikolaus Beck, Christine M. Beckman, and Mark Meyer. "Knowing Your Place: Social Performance Feedback in Good Times and Bad Times." *Organization Science* 25.6 (2014): 1684–1702.

In this quantitative study, they argue that firms have two reference points, "top performance threshold" and "reference group threshold" and that firms choose the reference point based on their prior performance. The authors use as the two reference points remaining in the league and winning a spot in an international tournament. They test their theory on a panel dataset on the top German soccer league.

Silva, Tânia, Miguel Pina e Cunha, Stewart R. Clegg, and Pedro Neves. "Smells like Team Spirit: Opening a Paradoxical Black Box." *Human Relations* 67.3 (2014): 287–310.

This is one of the few qualitative studies in soccer. By collecting data over a six-month period mainly through semi-structured interviews of a non-professional soccer team, they study how individuals experience and characterize team spirit.

### Nonathlete Studies in Sport Settings

The majority of studies using sports data tend to use data from the game or the competition itself. However, other stakeholders than just the managers and the athletes play a crucial role in sports and therefore can be worthwhile studying. For example the audience is one of professional sports' primary stakeholders; they play a significant role in creating and participating in sport culture. One of the earlier studies on the audience was conducted in [Harrell 1981](#), in which Harrell studies the verbal aggressiveness of spectators at ice hockey games. Later [Lok and De Rond 2013](#) studied institutional stability in the context of the boat race between Oxford and Cambridge. [Cole 2015](#) studies communication between members of a martial arts dojo, [Hahl 2016](#) examines the demand for authenticity in baseball and how it is affected by the prominence and size of players extrinsic rewards, and [Elsbach and Cable 2019](#) studies NASCAR stakeholders' identification with moderate prestige collectives. The second branch of studies has been interested in the entry drafts in major league US sports. An entry draft is an event in which teams can claim the rights of the new young players entering the league. The picking order in the draft is determined by the team's season performance so that the worst-performing team can choose first and therefore should be able to claim the best player's playing rights. [Staw and Hoang 1995](#) first used the NBA entry draft in their study on sunk costs and how the number of chances players get to prove themselves is affected by their draft number. Later [Massey and Thaler 2013](#) examined biases and in judgement and decision making in the NFL draft by looking at how teams overvalued earlier draft picks.

Cole, Benjamin M. "Lessons from a Martial Arts Dojo: A Prolonged Process Model of High-Context Communication." *Academy of Management Journal* 58.2 (2015): 567–591.

This study examines how context is utilized by communicators to communicate their message and how communicators can mix up the content and the context. The study is based on a five-year participant-observation ethnographic study on a Japanese martial arts dojo with more than 1,000 instructors and 50,000 students across five continents.

Elsbach, Kimberly D., and Daniel M. Cable. "Explaining Stakeholder Identification with Moderate Prestige Collectives: A Study of NASCAR Fans." *Organization Studies* 40.9 (2019): 1279–1305.

This is a mixed-methods paper on why stakeholders, in this case, fans, identify themselves with moderately prestigious collectives, such as NASCAR. The paper is an example of how fans or

other stakeholders can be used as the research subject when using motorsports as the research setting.

Hahl, Oliver. "Turning Back the Clock in Baseball: The Increased Prominence of Extrinsic Rewards and Demand for Authenticity." *Organization Science* 27.4 (2016): 929–953.

In this quantitative study, the author examines how customers' demand for authenticity increases when the prominence of extrinsic rewards (e.g., fame or salaries) in the market grows. It functions as an example of how experiments can be conducted in baseball and how baseball fans can be an area of interest for researchers.

Harrell, W. Andrew. "Verbal Aggressiveness in Spectators at Professional Hockey Games: The Effects of Tolerance of Violence and Amount of Exposure to Hockey." *Human Relations* 34.8 (1981): 643–655.

This quantitative study shows how other aspects of the sport than the game itself have been used to make advancement in management research. The study is a natural experiment that examines how hockey games provoke more verbal aggressiveness from spectators.

Lok, Jaco, and Mark de Rond. "On the Plasticity of Institutions: Containing and Restoring Practice Breakdowns at the Cambridge University Boat Club." *Academy of Management Journal* 56.1 (2013): 185–207.

The boat race between Oxford and Cambridge has remained the same over its 175-year history whereas during the same time the universities have undergone a significant social change. The authors conduct an ethnographic study on the boat race to examine how institutional stability can be achieved through practice performances.

Massey, Cade, and Richard H. Thaler. "The Loser's Curse: Decision Making and Market Efficiency in the National Football League Draft." *Management Science* 59.7 (2013): 1479–1495.

This quantitative study examines biases in judgment and decision making by looking at how teams overvalue earlier draft picks and therefore are less likely to trade down in the draft even if it they would be offered a better deal. It is the first study to use panel data from the NFL entry draft.

Staw, Barry M., and Ha Hoang. "Sunk Costs in the NBA: Why Draft Order Affects Playing Time and Survival in Professional Basketball." *Administrative Science Quarterly* 40.3 (1995): 474–494.

This quantitative study on sunk costs is an example of how the NBA entry draft can be used for management studies. In the study the authors use event history analysis to examine how players drafted earlier in the draft get more chances to prove themselves in the league.

## Other Sports

Several management studies in sport settings have been conducted in other sports than the major US sports, soccer, and athletics. In particular, individual sports have been common settings for behavioral studies. [Brown and Minor 2014](#) uses data from men's professional tennis to study in what way a player's past, current, and future competitions affect the probability that the player wins in an elimination tournament. [Dai, et al. 2018](#) uses men's professional tennis to examine the effect of performance expectations on performance. [Bothner, et al. 2012](#) conducts a study in multiple settings, professional golf, and motorsports to examine the effect of status on performance. [Allen, et al. 2017](#) studies reference-dependent preferences by examining how marathon runners finishing times tend to cluster around round numbers. [Smith, et al. 2009](#) uses poker to examine the effects of winning and losing on a player's risk propensity. Finally,

[Weekley and Gier 1989](#) studies the reliability and validity of the ratings given by judges in figure skating competitions. Besides individual sports, some of the lesser-known team sports have been used in management research as well. Competitive sailing has been used in [Ross and Sharapov 2015](#) and [Sharapov and Ross 2019](#) to examine imitation strategies and in [Bouty and Drucker-Godard \(2019\)](#) to examine managerial work and coordination. [Wright and Zammuto 2013](#) instead studies the institutional change in English county cricket.

Allen, Eric J., Patricia M. Dechow, Devin G. Pope, and George Wu. "Reference-Dependent Preferences: Evidence from Marathon Runners." *Management Science* 63.6 (2017): 1657–1672.

This quantitative study on reference-dependent preferences uses a large data set of marathon finishing times to examine how round numbers (e.g., finishing a four-hour marathon) functions as a reference point for marathon runners.

Bothner, Matthew S., Young-Kyu Kim, and Edward Bishop Smith. "How Does Status Affect Performance? Status as an Asset vs. Status as a Liability in the PGA and NASCAR." *Organization Science* 23.2 (2012): 416–433.

This quantitative article examines the relationship between status and performance. In this article the authors try to solve the limitations caused by the idiosyncrasy of the setting by using panel data from two different sports settings, in this case golf and NASCAR.

Bouty, Isabelle, and Carole Drucker-Godard. "Managerial Work and Coordination: A Practice-Based Approach Onboard a Racing Sailboat." *Human Relations* 72.3 (2019): 565–587.

This ethnographic study examines managerial work and the managerial function 'coordination' by using a practice-theory-based approach onboard a racing sailboat. The study shows how data can be collected in a sports setting. The data was collected both onboard and with interviews and the authors had the chance to participate in the crew's daily activities.

Brown, Jennifer, and Dylan B. Minor. "Selecting the Best? Spillover and Shadows in Elimination Tournaments." *Management Science* 60.12 (2014): 3087–3102.

This is an example of a study using panel data from tennis. In this quantitative study, the authors use men's professional tennis to examine how past, current, and future competition affect the probability that the better player wins in an elimination tournament.

Dai, Hengchen, Berkeley J. Dietvorst, Bradford Tuckfield, Katherine L. Milkman, and Maurice E. Schweitzer. "Quitting When the Going Gets Tough: A Downside of High Performance Expectations." *Academy of Management Journal* 61.5 (2018): 1667–1691.

This quantitative article looks at how high-performance expectation can improve performance. It is an example of an article that first conducts a field study in a sports setting, in this case men's professional tennis, and then replicates the results in a laboratory experiment.

Ross, Jan-Michael, and Dmitry Sharapov. "When the Leader Follows: Avoiding Dethronement through Imitation." *Academy of Management Journal* 58.3 (2015): 658–679.

In this quantitative article, the authors use panel data from competitive sailing to examine how efficient of a strategy it is for the leader in the race to imitate the follower's actions.

Sharapov, Dmitry, and Jan-Michael Ross. "Whom Should a Leader Imitate? Using Rivalry-Based Imitation to Manage Strategic Risk in Changing Environments." *Strategic Management Journal* (2019): 1–32.

In this quantitative study on imitation strategies in changing environments, the authors combine simulation with a field study in a sports setting. The authors first conduct a simulation to create propositions and then later test these propositions in the America's Cup World Series sailing race.

Smith, Gary, Michael Levere, and Robert Kurtzman. "Poker Player Behavior after Big Wins and Big Losses." *Management Science* 55.9 (2009): 1547–1555.

This quantitative study uses a paired difference test on data from poker, an intellectual rather than physical sport, to examine how poker players' risk propensity is affected by losing or winning a big pot or hand.

Weekley, Jeff A., and Joseph A. Gier. "Ceilings in the Reliability and Validity of Performance Ratings: The Case of Expert Raters." *Academy of Management Journal* 32.1 (1989): 213–222.

This article uses the 1984 figure skating competition and the judges of the competition to examine the reliability and validity of ratings from expert raters.

Wright, April L., and Raymond F. Zammuto. "Wielding the Willow: Processes of Institutional Change in English County Cricket." *Academy of Management Journal* 56.1 (2013): 308–330.

This is a longitudinal archival study of cricket clubs in England, in which the authors investigate the institutional change process that transformed cricket from an aesthetic sport for the social elite to a businesslike sport.