Introduction

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This book addresses several important areas of ongoing research in sports economics. Outcome uncertainty recently emerged as a hotly debated topic in sports economics after new theoretical insights challenged the dominant approach for understanding how uncertain sporting-event outcomes affect consumer decisions. Competitive balance research constitutes a large portion of the overall body of published sports economic research and dominates media headlines around the world. Both topics represent key current areas of interest for sports leagues and sports fans.

This volume contains 11 chapters. Eight of these address the uncertainty of outcome hypothesis and three address outcome uncertainty. The chapters make a number of important and insightful contributions to the sports economics literature. Several use novel data and address important yet overlooked topics. Taken together, these chapters represent an interesting volume worthy of careful study by sports economists.

A vast literature on competitive balance exists, so any new work addressing this topic faces a high bar when readers decide if they should devote time and effort to reading it. All eight chapters on competitive balance in this collected volume easily pass this test. Competitive balance in individual sports receives less attention than competitive balance in team sports, and is an area clearly in need of more research.

Oliver Budzinski and Arne Feddersen, in ‘Measuring competitive balance in Formula One racing’, tackle the issue of competitive balance in Formula One car racing, one of the most popular sports in the world. Despite this popularity, little research focuses on Formula One racing. Budzinski and Feddersen develop novel, motor-sport specific competitive balance measures that can readily be applied to NASCAR or other motor sports. Despite clear dominance by a small group of teams and drivers in championships, they find little evidence of declining competitive balance in their motor-sport specific measures.

Carlos Gomez-Gonzalez and Julio del Corral, in ‘Professional tennis in the twenty-first century: Hawk-Eye on competitive balance’, assess

competitive balance in another individual sport, tennis. This up-to-date analysis contains several novel features, including an analysis of both Grand Slam and low-profile tournaments, an empirical approach that accounts for the impact of playing surface, a condition unique to tennis, and tournament structure on competitive balance.

Stephen Jenkins and E. Frank Stephenson, in 'When teammates are a drag: the effect of Spingate on the benefit of NASCAR drivers having teammates', also analyze competitive balance in motor sports, in this case NASCAR. This chapter investigates an interesting aspect of NASCAR racing: some organizations field multiple drivers in each race, while other drivers compete independently. This can potentially affect competitive balance through on-course and off-course channels. The chapter finds evidence that drivers for organizations that field more cars in a race perform better, which probably reduces competitive balance in the sport.

In 'Game, set, match and loss aversion in tennis' Mikala Lowrance, Jacob Miller and Joshua Price take a different approach to tennis, analyzing the impact of loss aversion in efforts put in by professional tennis players in tournaments. Effort provision by athletes represents a key mechanism underlying competitive balance in sports. Different levels of effort provision by athletes can generate competitive imbalance even in the presence of policies designed to promote competition. Previous research found that tennis players behave in a way consistent with loss aversion, and that males seek risk while females avoid risk. This chapter does not find similar evidence based on a different dataset. This calls into question the robustness of previous results in the literature, and indicates that loss aversion may not affect competitive balance.

Bernd Frick and Hannes Winner, in 'Deferred compensation when monitoring is (nearly) costless: evidence from professional football', also address the fundamental issue of effort provision and incentives in sport. Again, without a full understanding of the impact of incentives on athlete effort provision, competitive balance can only be partially understood. The chapter analyzes age-earnings and age-value profiles for professional football players in the Bundesliga and Serie A, two top European football leagues, to identify differences. If these two profiles differ, teams do not adequately incentivize young players to provide maximum effort in sports competitions, potentially affecting competitive balance. The chapter finds evidence that teams appropriately use deferred compensation to motivate players to supply effort, a result with broad implications for other areas of sport where deferred compensation exists.

A set of three related chapters examine competitive balance from different perspectives, using different data and methods. James Reade, in 'A highly disaggregated look at competitive balance', takes a novel approach

to the analysis of competitive balance, analyzing data attendance at the turnstile-by-turnstile level for a single English football team, Preston North End, for the 1955–56 and 1991–92 seasons, periods with high competitive balance in English football. Economists rarely have access to such data and Reade makes good use of it here. He concludes that fans prefer to see home-team wins and superstars, important results for outcome uncertainty research, but that they do not care much about long-run competitive balance.

Thadeu Gasparetto and Angel Barajas, in ‘The competitiveness of football at the national-team level’, analyze competitive balance in international football competitions played by national teams. National-team competitions, such as the World Cup, represent the most popular sporting events in the world but little research addresses competitive balance in these competitions. This chapter uses an interesting measure of competitive balance, the difference in goals scored, to assess changes in international football competitions over a long time period and finds improvements in competitive balance over time. This suggests a gap between powerhouse football national teams, such as Brazil, France and Spain, and other less successful national teams over time.

Luis Carlos Sánchez, Angel Barajas and Patricio Sánchez-Fernández, in ‘The price of football depends on the owner of the ball and the unbalance of the league’, tackle the important and under-researched question of how ownership forms affect team pricing decisions. While not directly related to competitive balance, the chapter addresses how different team ownership forms affect team’s organizational goals, which has a bearing on competitive balance. The chapter finds that ownership forms affect team pricing decisions in that the more concentrated team ownership, in terms of concentration of voting shares, the higher the price on the lowest-cost season ticket packages offered by football teams in the four largest European domestic leagues. This interesting result implies that ownership forms with less fan involvement tend to exploit fans more.

The final three chapters address outcome uncertainty in sport, and the impact of outcome uncertainty on attendance. Again, substantial debate about this topic exists in sports economics. Stefan Kesenne, in ‘Do football spectators like dynasties? Long-term uncertainty of outcome and stadium attendance’, takes a novel, long-run view of outcome uncertainty. Most outcome uncertainty research takes a short-run view. Kesenne develops a new measure of long-run outcome uncertainty, the number of times a team finished first or second in the final league table over the past 25 years, and uses this to explain variation in attendance in 25 European domestic leagues. The results indicate that fans prefer more outcome uncertainty, in that lower attendance exists under dynasties than in time periods with

more turnover at the top of the table. This result implies that outcome uncertainty may operate differently at different timescales.

Thabo J. Gopane and Khumo T. Mokgatle, in ‘Empirical analysis of match outcome uncertainty on soccer attendance: evidence from South Africa’, extend outcome uncertainty research to a new setting: top-level football in South Africa. Sports economists know little about fan decision making in developing countries. This chapter takes important strides in addressing this lack of knowledge. The chapter analyzes data from the South African Premier Soccer League over five seasons (2010/11–2014/15) and uses the competitive balance ratio as the outcome uncertainty proxy. The results indicate that South African football fans prefer to attend matches with uncertain outcomes, an interesting and novel result.

Finally, Dennis Coates and Brad R. Humphreys, in ‘Outcome uncertainty, home-win preference, and econometric identification of the game uncertainty–attendance relationship’, wade into the ongoing debate on how to address the identification issue raised in a 2015 article (Humphreys and Zhou, ‘The Louis–Schmelling paradox and the league standing effect reconsidered’, *Journal of Sports Economics*). The Humphreys and Zhou article shows that most match-level outcome uncertainty papers use only two variables, home-team win probability and home-team win probability squared, to identify three structural parameters affecting attendance decisions (preference for home-team success, outcome uncertainty and loss aversion). The authors expand attendance into the components linked to home fans and away fans, which introduces additional relationships among the structural parameters allowing them to be identified. This approach generates different results than in their previous papers.