

## Economics of Sports: A Note to this Special Issue

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The expansion of economics to other spheres of life, including politics, war, crime, religion, or in particular sports can be seen in line with Hirshleifer (2002) as a breath of fresh air in economics. Although one can always criticize the generalizability of results developed with sports data, sporting events can still be seen as economic (miniature) environments. There is no reason not to acknowledge that athletes, for example, behave according to two key elements in economics, namely *incentives* and *constraints*. Focal economic concepts such as prices, opportunity costs or property rights can be nicely investigated in sports markets and are supposed to drive the behaviour of their key actors. An essential strength of sports events is the fact that they take place in a controlled environment generating therefore outcomes that come very close to *holding other things equal*, providing therefore a real-world laboratory for testing economic theories. Researchers have the chance of working with highly reliable data (low variable errors) and reduced omitted variables biases. The advantages can be visualized using the Tour de France as an example. The ranking of a cyclist at the Tour de France, his performance in the mountains or the time trials are clearly observable and are free of discrepancies compared to well known and often used traditional economic variables such as GDP or CPI. Statistics can be adjusted based on the outside conditions (stadium, weather conditions etc.). A Tour de France takes place in a controlled environment. All riders perform in the same terrain at the same time with the same outside restrictions such as the weather. Further external influences are controlled by the rules (law) of the event, as they are the same for all riders. Thus, many factors can be held constant and therefore the situation is much like a controlled environment. Even though a cycling event allows social and economic interactions and is thus less controlled than a laboratory experiment one of the main advantages is that the participation evokes actual and real processes (e.g., strong monetary incentives) in an environment outside a laboratory setting (Goff and Tollison 1990).

This special issue starts with a policy section of doping. Doping is an important topic in sports. It is somehow a timeless issue still unsolved from a policy perspective. The incentive to cheat is critical in sports markets. Sports markets are often characterized by a winner-take-all market where the top performers are able to earn a large proportion of the available “financial cake”. In other words, athletes who are only “marginal” worse than the best competitors will

get nearly nothing compared to the best who receive the predominant share of the prize money available (see Frank and Cook 1995).

Our policy section starts with a contribution of *Cycling Australia* written by **Graham Fredricks** (CEO Cycling Australia), **Shayne Bannan** (High Performance Director, Cycling Australia) and **David T. Martin** (Sport Scientist at the Australian Institute of Sport and Sport Science Coordinator for Cycling Australia). Cycling is strongly affected by the incentives to cheat also due to tough conditions in which athletes need to perform over a relatively long period of time (e.g., large number of stages in a Tour de France). We all, for example, remember that Floyd Landis went on to win the 2006 Tour the France but was subsequently stripped of the titles after tests indicated that Landis was doped. It is therefore useful to provide Cycling Australia a forum to discuss possibilities how to handle doping. Fredricks, Bannan, and Martin stress that Cycling Australia is not in a position to set an anti-doping agenda in isolation of international and national agencies. They are keen to do an active participation in ongoing reforms and stress the importance of supporting research projects that aim at understanding athletes' perceptions concerning a doping culture. As a key role they stress the importance of Cycling Australia to contribute to the refinements of testing and educating. They are also in favor of punishing violations of international policy with maximum penalties.

This contribution is followed by three pieces written by leading researchers (mainly economists) in the area of doping. All have written important papers on doping in the past and provide now in this special issue potential solutions to the problem of doping. **Edward Castronova** and **Gert G. Wagner** stress the relevance of informal rules. In the spirit of 2009 Nobel Prize winner Elinor Ostrom they stress that sport rules are a response to the common property resource problem. They advocate a decentralized solution when behavior is hard to observe and imposing sanctions are costly. They are very skeptical of a centralized solution such as the current method of publishing and enforcing a list of banned substances. They are more in favor of a decentralized enforcement of doping norms via a freely available "drug diary" where athletes can find out about the drug regimes of other athletes and then impose stigma on such athletes if something is missing. Athletes could be subject to tests and investigations at any time if other athletes request it, and the penalties are only applied for using a non-declared drug.

Next, **Nicolas Eber** also stresses the importance of norms, namely fair play norms. It can be shown theoretically that this leads to a further equilibrium, namely a "good no-doping" one. This makes athletes to conditional cooperators. If athletes are guided by fair play values, they don't take drugs if they expect that the other competitors are also honest, but they would take drugs when they expect others to take drugs. This leads to the importance of issues such as preplay communication to coordinate athletes' intentions. Nicolas Eber also discusses at the end whether fighting against doping is actually really desirable.

Finally, **Wolfgang Maennig** is more critical in regards to ethical standards and moral suasion using a cost-benefit approach in line with Gary Becker. He also stresses that competition bans are not sufficient in increasing the expected costs of doping. He advocates in favor of strong financial penalties that raise the expected costs of doping. He stresses that competition associations or organizers should require athletes to contractually agree to such penalties before the competitions. One could think of deferred compensation models such that, e.g.,

sponsoring money would have to be paid into funds which would then be paid out at the end of a sporting career. Certainly, such an approach is not free objections and Wolfgang Maennig discusses also shortcomings of such an approach and its implementation.

The policy section is followed by seven research articles that discuss a broad variety of topics using different kind of tools (from theoretical oriented papers to empirical ones). A common element across most of these papers is that they have been written by relatively young, very promising and talented academic researchers. Researchers and readers interested in the area of economics of sports can be advised to remember the names of these researchers and follow their academic career as one can expect great contributions from these authors in the future.

**Raul Caruso** starts the section discussing a relevant phenomenon of sports contests, namely match-fixing. The author presents an interesting model that goes beyond the traditional contest model, differentiating between match-fixing and tacit collusion. Caruso not only presents a model but also applies the model to assess major football competitions, namely the UEFA and FIFA tournaments.

Next, **Stephan Nüesch** empirically tests the relationship between age, tenure, race diversity and team performance using a large data set of all the games of the German soccer league *Bundesliga* over six seasons (2001/02 until 2006/07). Interestingly, the statistically significant correlations between age and tenure diversity and team performance disappear once you control for mean values (age and tenure) and contextual aspects such as team's relative payroll and game and team characteristics (e.g., coach and team fixed effects).

In a further step, **Reiner Eichenberger** and **David Stadelmann** explore interesting and challenging question: Who is the best Formula 1 driver? The problem is that observable performance of a driver depends not only on his talent but also the quality of his cars. Thus, the strength of this contribution is to provide an approach to separate driver talent from car quality analyzing econometrically a large data set that covers 57 years of Formula 1 racing. To isolate talent they also control for issues such as the number of drivers finishing, technical breakdowns and other factors that can influence race results. Their results indicate that the best Formula 1 driver ever is not Michael Schumacher but Juan Manuel Fangio. Interestingly, when comparing the number of entries per country among the better 62 racers and the worse 62 racers, respectively, the results show that Australia and New Zealand have each three drivers among the better 62, but none among the worse 62 racers. No other country has such a good performance. The most talented Australian drivers are Mark Webber on position 27, followed by Jack Brabham (47) and Alan Jones (52).

The next contribution has also an Australian focus. **Liam J. A. Lenten** provides an interesting new measure for competitive balance that provides the bridge between within- and between-season analyses. He focuses on Australia's two largest professional sports league, namely the Australian Football League (AFL) and the National Rugby League (NRL). The author successfully shows the usefulness of applying alternative measures to better explore the relevance of competitive balance. His new measures are a useful complement in a time-series historical empirical analysis of professional sports leagues.

**Alexander Dilger** and **Hannah Geyer** analyse in a further paper the dynamic of bicycle finals or to be more exact slipstreaming. Besides discussing the physics of slipstreaming they

also provide a model of overtaking. This leads to three hypotheses, namely whether better riders win the race, whether better riders also ride in the slipstream, and whether riders in the slipstream will win more often than riders who start the sprint out of the front position. The empirical results indeed indicate that the hypotheses cannot be rejected.

After focusing on cycling, we present a paper that focuses on another important Aussie sport, namely cricket. **Henry Shelton Brown III** stresses that batting averages in cricket are not absolute measures of batsmanship across different eras, they are much more relative measures of batting performance in comparison to bowling and fielding. Cricket experts and fans under-appreciate the skills of modern batsmen when mistakenly interpreting the batting average as an absolute measure of batsmanship. The paper attempts to make a meaningful historical comparison showing wider variations in batting averages in previous decades. The coefficient of variation of batting averages is quite high in the times of legendary performance (e.g., 1940s). Thus, modern batsmen deserve more respect and consideration.

Finally, the main article section finishes with an interesting contribution by **Lionel and Katie Page**. They examine a particular situation in a tournament, namely when rewards do not create the incentive to win. For this they explore football games at the group stage in the Champions League and the Europa League from 1992 to 2009. To be more precise they focus on situations where teams are already sure to finish either first or last at the penultimate stage in the group. Interestingly, we observe a decrease of performance (goals and winning) for the team sure to finish first and on the other hand an increase in performance of a team sure to finish last. The first finding is in line with an economic prediction (e.g., lack of motivation or strategic move using not the best players). Such a result has the policy implication that the schedule of the match order matters. The second result is more puzzling for an economist. The Page couple provide two potential explanations, namely *social pressure* and *pride*. Teams finishing last are often weaker than the other teams and when playing without stakes the level of pressure strongly decreases which has a positive effect on their performance. The social psychology literature, e.g., has shown that performances deteriorate more significantly for competitors of lower ability when being under social pressure. In addition, one can state that such a team will only play for pride (alternative incentive to perform better). Also here we find evidence from the social psychology literature that suggest that pride is an important motivator in overall performance and perseverance. In general, their interesting results provide the incentives to use a broader notion of individual and team motivations.

Finally, this special issue finishes with a book review written by **João Ramos**. Ramos provides a nice review of Stefan Szymanski's recent book *Playbooks and Checkbooks: An Introduction to the Economics of Modern Sports*. The book has been published by Princeton University Press and one should note that Szymanski is one of the leading researchers in the area of economics of sports.

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