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One for Sure or Maybe Three

Empirical Evidence for Overtime Play from a Comparison of Swiss Ice Hockey and the NHL

By Egon Franck and Philipp Theiler, Zurich

JEL D23; L83

NHL; Swiss Ice Hockey National League; overtime; incentive effects; three-point rule; rule-changes.

Summary

In order to avoid too many tied games after playing the five-minute overtime period, the National Hockey League (NHL) introduced two rule changes in the 1999-2000 season. First, a team that loses in overtime receives one point instead of zero points. Second, the number of skaters in overtime is reduced from five to four. The theoretical literature analyzing these rule changes predicted that they would also produce the unintended side-effect that more games would reach overtime and recommended that a team that wins in regulation should receive three points (instead of two) in order to counterbalance the converse effect. We are the first to empirically support this theoretical prediction using NHL data and data from Swiss ice hockey, in which the rule changes of the NHL were copied in the 2006-2007 season and in which the three-point rule was also introduced.

Beating thy Neighbor: Derby Effects in German Professional Soccer

By Agnes Bäker, Tübingen, Mario Mechtel, Trier and Tübingen, and Karin Vetter, Tübingen

JEL L83; Z0

Soccer; team performance; city derby; Bundesliga.

Summary

It is widely acknowledged that derbies between two teams from the same city or region catch more public attention than “normal” soccer matches. Terms such as “Old Firm” (Rangers vs. Celtic), “Merseyside” (Liverpool FC vs. Everton FC), “Superclásico” (Boca Juniors vs. River Plate), and “Revierderby” (Dortmund vs. Schalke) are well-known even to people outside their respective countries of origin. Using data from the German Bundesliga from 1999 to 2009, we test whether derbies differ from other soccer matches with respect to the number of goals scored by each team, match results, and referee evaluations. The results are very surprising given the enormous amount of public attention that derbies with their special character attract: we find that there are no significant differences between derbies and “normal” matches. Despite the importance of derbies for fans and the public, they turn out to be “normal” soccer matches in all other respects.

Empirical Evidence on the “Never Change a Winning Team” Heuristic

By Stephan Nüesch, Zürich, and Hartmut Haas, Cologne

JEL D03; L83; M54

Heuristics; decision-making; behavioural economics; regret aversion.

Summary

“Never change a winning team” is a well-known heuristic that recommends not altering the composition of successful teams. Using game-level observations of the highest German soccer league over a period of seven seasons, we find that the number of changes in the starting line-up is significantly lower after wins than after losses, taking suspensions and unobserved team heterogeneity into account. We show that teams of coaches who follow the heuristic do not win significantly more often, and that coaches significantly decrease the number of changes in the starting line-up even after wins caused by the exogenous home field advantage. These results provide first suggestive evidence that coaches may be influenced by behavioural concerns when following the heuristic to not change winning teams.

A Market's Reward Scheme, Media Attention, and the Transitory Success of Managerial Change

By Bernd Süssmuth, Leipzig, and Stefan Wagner, Berlin

JEL D82; J41; L14; M52

Incentives; structural change; moral hazard; professional sports.

Summary

Against the background of growing media interest in professional soccer, this paper proposes a moral hazard model with costly state verification to explain how rule changes affecting the reward scheme of team performance impact on the success of managerial change. As has been shown recently based on four decades of data from the German soccer premiership by Wagner (2010), the incentive change in professional soccer leagues enacted by the FIFA in 1995/96 rendered the drastic measure of firing a coach a more efficient instrument in the clubs' striving for success. In contrast to existing approaches, our model by accommodating the role of media interest is able to jointly explain (i) the impact of introducing an asymmetric reward scheme, (ii) of managerial turnover and (iii) of the perceived degree of ambition of a club on the athletic output of the team. It is shown that the rule change induces a higher agency cost, which is temporarily economized by clubs that change their management. This cost reducing effect temporarily enhances the efficiency of generating athletic output for top league clubs.

Gold, Silver, and Bronze: Determining National Success in Men's and Women's Summer Olympic Events

By Eva Marikova Leeds, Bethlehem, USA, and Michael A. Leeds, Philadelphia, USA

JEL L83; J16; J22

Olympic medals; gender differences.

Summary

We add to the literature on Olympic performance by explicitly studying the determinants of women's performance at the Games. We estimate separate models of medal production for men and women over the last four Summer Olympic Games. The production of medals is a function of capital, labor, and total factor productivity (TFP). We use real GDP per capita and population – two variables that appear in almost all Olympic studies – as proxies for capital and labor. Our measure of TFP is a vector of variables that captures a nation's willingness and ability to marshal its resources to promote Olympic performance and variables that determine its willingness to support its women. Because the dependent variable is a count measure, we estimate the production function using a negative binomial framework. We find that the determinants of success by a nation's women closely resemble the determinants for its men. We also show that some determinants of gold medal counts differ from the determinants of silver and bronze medals. Our findings suggest that nations can improve the medal performance of men and women by following policies that increase the political and economic participation of women.

Inner-Outer Lane Advantage in Olympic 1000 Meter Speed Skating

By Richard Kamst, Gerard H. Kuper, Gerard Sierksma, and Bertus G. Talsma, Groningen, The Netherlands

JEL C23; D02; L83

Olympic Games; speed skating; statistics; competition design.

Summary

During the Olympic Games and the World Championships Single Distances the 1000m is skated by every skater only one time. However, there may be a difference in skating a 1000m race with a start in the inner and the outer lane that introduces an externality that introduces unfairness. We show that this difference indeed exists. For the period 2000-2009 we observe a statistically significant advantage of starting in the inner lane of 0.120 seconds for women. For male skater the difference between starting lanes is 0.030, but not significantly different from zero. In order to make the competition fair, we suggest that the 1000m should be skated twice.

Employment Effects of the 2002 Winter Olympics in Salt Lake City, Utah

By Robert Baumann, Bryan Engelhardt, and Victor A. Matheson, Worcester Massachusetts, USA

JEL L83; O18; R53; J23

Olympics; impact analysis; mega-event; tourism.

Summary

Local, state, and federal governments, along with the Salt Lake City Organizing Committee, spent roughly \$1.9 billion in planning and hosting the 2002 Winter Olympic Games. Event promoters suggested that the Games would increase employment in the state by 35,000 job-years. We investigate whether the 2002 Winter Olympics actually increased employment finding that the Games' impact was a fraction of that claimed by the boosters. While the Salt Lake City Olympics did increase employment overall by between 4,000 and 7,000 jobs, these gains were concentrated in the leisure industry, and the Games had little to no effect on employment after 12 months.

The Effects of Institutional Change in European Soccer

By Marco A. Haan and Ruud H. Koning, Groningen, NL, and
Arjen van Witteloostuijn, Antwerpen, Belgium

JEL F15; F22; L83

Bosman ruling; Champions League; soccer.

Summary

The last decades have seen two profound changes in European soccer. First, international trade in talent has increased markedly. Second, international competitions such as the Champions League have become much more important. Using a theoretical model, we study how these changes affect competitive balance within national competitions, and quality differences between national competitions. Introducing international trade in talent leads to a flow to large countries, as the returns to talent are higher there. Wages increase in small countries, but decrease in large ones. The wage increase in small countries hurts small teams more than large ones. Therefore, competitive balance decreases. The wage decrease in large countries benefits small teams more, so competitive balance increases. The introduction of a Champions League implies the possibility to win a large amount of prize money. This is relatively more important for small teams. Hence, competitive balance increases in all countries, and talent flows from large to small countries, provided international trade is possible. Wages increase. When looking at both changes combined, we find that talent flows from small to large countries. Hence, in this sense, the trade effect dominates the Champions League effect. Competitive balance increases in all but the very smallest countries.

A Contest Model of a Professional Sports League with Two-Sided Markets

By Helmut Dietl, Tobias Duschl, Egon Franck, and Markus Lang, Zurich

JEL L11; L13; L83; M21

Competitive balance; contest; multisided market; network externalities; team sports league.

Summary

This paper develops a model of a professional sports league with network externalities by integrating the theory of two-sided markets into a two-stage contest model. In professional team sports, the competition of the clubs functions as a platform that enables sponsors to interact with fans. In these club-mediated interactions, positive network effects operate from the fan market to the sponsor market, while positive or negative network effects operate from the sponsor market to the fan market. We show that the size of these network effects determines the level of competitive balance within the league. If the market potential of the sponsors is small (large), competitive balance increases (decreases) with stronger combined network effects. We further deduce that clubs benefit from stronger combined network effects through higher profits and that network externalities can mitigate the negative effect of revenue sharing on competitive balance. Finally, we derive implications for improving competitive balance by taking advantage of network externalities. For example, our model suggests that an increase in the market potential of sponsors produces a more balanced league.

Infant Mortality of Professional Sports Clubs: An Organizational Ecology Perspective

By Bernd Frick and Björn Wallbrecht, Paderborn

JEL L22; L25; L83

Team sports leagues; survival; relegation.

Summary

Due to their limited financial resources winning the national championship or qualifying for an international cup competition is not a viable option for most small market clubs in any of the European professional team sports leagues, such as soccer, ice hockey, basketball or handball. However, since a particularly poor performance is usually punished by relegation and since being relegated to the respective second division is associated with a dramatic decline in revenues, avoiding relegation is a target in itself. Using data from seven different professional team sports leagues in four different countries we estimate various parametric and semi-parametric regression models to identify the determinants of the clubs' length of stay in their respective first division. In line with the organizational ecology literature we find that club experience, previous club performance (number of previous championship titles and number of previous relegations) and market size (average attendance) affect survival in a statistically significant and economically relevant sense. Perhaps surprisingly, founding conditions seem to be irrelevant for a club's length of stay in its respective first division.