

**The Economics of Contests and Tournaments
(Micro-Economic Foundations for Business Economists)**

**Stefan Szymanski
Professor of Economics, Cass Business School**

15th – 19th December 2008

Aims and Objectives

This course provides an introduction to the economic theory of contests and will use sports as an example of how the theory can be applied. The course is intended to familiarise the student with the basic models and then explore some policy issues that have arisen in the design of sports competitions. On the theoretical side it will focus on the development of rent seeking models in the tradition of Tullock. From the point of view of sports, it will look at issues of competitive balance that have entered into public policy debate in the US and Europe.

Course Structure

The course is divided into nine half-day units. Each unit will consist of three sessions. The first will be in lecture format, introducing the topic, the second will discuss a key paper in the area, for classroom discussion led by a member of the class, and the third will involve a case study discussion based on a particular topic.

Course Requirements:

In preparation of the course:

- Carefully work through the required readings with a focus on the research question, the contribution to the literature and the research design.
- Skim the additional readings to get a basic sense for the research question.
- Prepare a two-page summary of the assigned paper to be distributed before class.

During the course:

- Lead the class discussion of the assigned paper.
- Contribute to class discussions when you are not the leader.

After termination of the course:

- Write a short report (up to 2000 words) on the organization of a sports league of your choice. You should assess the state of demand in the light of contest incentives and competitive balance. You have one week to complete this task

Unit 1: The Principal-agent problem

Key paper: Holmstrom, Bengt.. 1982. "Moral Hazard in Teams." *Bell J. Econ.* 13 (Autumn): 324–40.

Related readings:

Alchian, Armen A., and Harold Demsetz. 1972. "Production, Information Costs, and Economic Organization." *A.E.R.* 62 (December): 777–95.

Canice Prendergast, "The Provision of Incentives in Firms", *Journal of Economic Literature*, Vol. 37, No. 1. (Mar., 1999), pp. 7-63

David EM Sappington "Incentives in Principal-Agent Relationships", *The Journal of Economic Perspectives*, Vol. 5, No. 2. (Spring, 1991), pp. 45-66

Case Study: Do Basketball Players Shirk?

Shirking On The Court: Testing For The Incentive Effects Of Guaranteed Pay, David J. Berri And Anthony C. Krautmann, *Economic Inquiry*, Vol. 44, No. 3, July 2006, 536–546

Unit 2: The Tullock Contest

Key Paper: Tullock (1980) "Efficient Rent Seeking" in J. Buchanan R Tollison and G. Tullock, eds. *Toward a Theory of Rent Seeking Society*. Texas A&M University Press, 97-112.

Related Readings:

Nti K. (1997) "Comparative statics of contests and rent-seeking games" *International Economic Review*, 38, 1, 43-59.

Michael R. Baye, Dan Kovenock and Casper G. de Vries "The Solution to the Tullock Rent-Seeking Game When R Is Greater Than 2: Mixed-Strategy Equilibria and Mean Dissipation Rates" *Public Choice*, 1994, vol. 81, issue 3-4, pages 363-80

Konrad, K. (2007), "Strategy in contests—an introduction", Discussion Paper SP II, Wissenschaftszentrum Berlin. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=960458

Case Study: How to design a marathon

Frick, B. and Prinz, J. (2002), 'Pay and Performance in Professional Road Running: The Case of City Marathons', Department, of Economics, University of Witten/Herdecke, mimeo.

Unit 3: Labour Market Tournaments

Key Paper: Rosen S. (1986) "Prizes and incentives in elimination tournaments" *American Economic Review*, 76, 701-15.

Related Readings:

O'Keefe, M., Viscusi, W. and Zeckhauser R., "Economic contests: comparative reward schemes", *Journal of Labor Economics*, 1984, 2, 1, 27-56

Lazear, E. and Rosen, S. (1981) "Rank Order Tournaments as Optimal Labor Contracts", *Journal of Political Economy*, Vol. 89, pp. 841-864.

Shleifer, A. (1985) "A Theory of Yardstick Competition", *Rand Journal of Economics*, Vol. 16, pp. 319-327.

Case Study: The impact of the three point rule in football.

Luis Garicano & Ignacio Palacios-Huerta, 2001. "An Empirical Examination of Multidimensional Effort in Tournaments," Working Papers 2001-14, Brown University, Department of Economics.

Unit 4: Empirical Research on tournaments and contests

Key Paper: Ehrenberg R. and Bognanno M. (1990a) "Do Tournaments have incentive effects" *Journal of Political Economy*, 98, 6, 1307-1324

Related Readings

Knoeber, Charles R. and Thurman, Walter N., "Testing the Theory of Tournaments: An Empirical Analysis of Broiler Production," *Journal of Labor Economics*, Vol. 12 (2), April 1994, 155-179.

Lynch, James G., and Jeffrey S. Zax, "The Rewards to Running: Prize Structure and Performance in Professional Road Racing," *Journal of Sports Economics*, Nov 2000; 1: 323 - 340.

Maloney, M.T. and McCormick, R.E., "The Response of Workers to Wages in Tournaments: Evidence from Foot Races," *Journal of Sports Economics*, Vol. 1 (2), May 2000, 99-123

Case Study: the Limits of Incentives

Jennifer Brown, Quitters never win, the (adverse) incentive effects of competing with superstars

Unit 5: Competitive balance in sports

Key Paper: J-L Arnaut, The Independent European Sports Review
http://www.independentfootballreview.com/doc/Full_Report_EN.pdf

Related Readings:

Rottenberg S. (1956) "The baseball player's labor market" *Journal of Political Economy*, 64, 242-258

Szymanski, Stefan 2003. "The Economic Design of Sporting Contests" *Journal of Economic Literature*, XLI, 1137- 1187.

Flynn, Michael and Richard Gilbert. 2001. 'An Analysis of Professional Sports Leagues as Joint Ventures' *Economic Journal*, 111, F27-F46.

Case Study: Trends in competitive balance in European football

UEFA proposals on training of young players:
http://www.uefa.com/multimediafiles/download/uefa/uefamedia/273606_download.pdf

Unit 6: The Contest Nash Equilibrium of a Sports League

Case Study: This is a simulation exercise involving participation of the whole class. No preparation is required.

Related Readings:

Forrest, David and Robert Simmons. 2002. "Outcome uncertainty and attendance demand in sport: the case of English soccer," *Journal of the Royal Statistical Society, Series D (The Statistician)*, Vol. 51, No.2, 229-241"

Schmidt, Martin and David Berri. 2001. "Competitive Balance and Attendance: the Case of Major League Baseball", *Journal of Sports Economics*, 2, 2, 145-167.

Borland, Jeffery And Robert Macdonald, 2003 "Demand For Sport", *Oxford Review Of Economic Policy*, Vol. 19, No. 4, Pp. 478-502

Unit 7: Competitive balance, the Coase theorem and the paradox of power

Key Paper: Hirshleifer, J., 1991a. The Paradox of Power. *Economics and Politics* 3, 177-200

Related Readings:

Hirshleifer, J., 1989a. Conflict and Rent-Seeking Success Functions: Ratio vs. Difference Models of Relative Success. *Public Choice* 63, 101-112.

Szymanski, Stefan and Stefan Késenne, 2004. "Competitive balance and gate revenue sharing in team sports" *Journal of Industrial Economics*, LII, 1, 165-177.

Szymanski, Stefan, "The Champions League and the Coase Theorem", *Scottish Journal of Political Economy*, 2007, Vol: 53, 355 – 373

Case Study: Predicting Olympic Medals

Andrew B. Bernard and Meghan R. Busse, "Who Wins the Olympic Games: Economic Resources and Medal Totals" *Review of Economics and Statistics*, February 2004, Vol. 86, No. 1, Pages 413-417

Unit 8: Objectives

Key Paper: Késenne, Stefan. 2000. "The Impact of Salary Caps in Professional Team Sports", *Scottish Journal of Political Economy*, Vol 47, No 4, pp422-430.

Related Readings:

Sloane, Peter. 1971. "The Economics of Professional Football: The Football Club as a Utility Maximizer", *Scottish Journal of Political Economy*, 17, 2, 121-146.

Zimbalist, A. (2003). Sport as Business. *Oxford Review of Economic Policy*, 19 (4), 503-511

Pedro Garcia-del-Barrio and Stefan Szymanski "Goal! Profit maximization vs win maximization in soccer leagues," *Review of Industrial Organization*, forthcoming http://www.holycross.edu/departments/economics/RePEc/spe/GarciaSzymanski_Goal.pdf

Case Study: Is vertical separation of sports leagues optimal?

Stephen F. Ross and Stefan Szymanski "Governance and vertical integration in team sports", *Contemporary Economic Policy*, 2007, 25, 4, 616-626

Unit 9: The incentive effects of promotion and relegation

Key Paper: Noll, Roger. 2002. "The economics of promotion and relegation in sports leagues: the case of English football" *Journal of Sports Economics*, 3, 2, 169-203.

Related Readings

Szymanski, Stefan and Tommaso Valletti, "Promotion and relegation in sporting contests," *Rivista di Politica Economica*, vol. 95, 3-39, 2005.

European Commission.1998. The European Model of Sport. Consultation paper of DGX. <http://www.sport-in-europe.com/SIU/HTML/PDFFiles/EuropeanModelofSport.pdf>

Hoehn, Thomas and Stefan Szymanski. 1999. "The Americanization of European Football" *Economic Policy* 28, 205-240.

Case Study: The Atlantic League

Atlantic League or North Atlantic Drift? <http://www.le.ac.uk/sp/sf-review/00-01/01article9.html>