

# The Economics of Professional Team Sports: content, trends and future developments

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## **Abstract**

The objective of this paper is to present the prevailing content, trends and future developments of professional team sports economics. The purpose of this paper is not to provide a full record of all professional team sports related research with an economic content, but rather to point out the main issues that sports economics tackle since their birth and track the evolution of these issues as a response to the changing environment of team sports. League market structure, team objectives, demand, financing, labor markets and sports broadcasting are the most prominent areas of interest in professional team sports economics. Differences in organizational structure of professional team sports in Europe and U.S.A. shape the research agenda on the two sides of the Atlantic accordingly. Future developments should capture both economic and social aspects of contemporary professional team sports.

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**Key Words:** *Economics, professional team sports, demand, player labor markets, sports broadcasting.*

The study of professional team sports economics has expanded in the last decades in response to a substantial increase in the demand and supply of professional team sports. Factors such as the televising of events that has brought substantial amounts of money into the industry; the free movement of players after the Bosman ruling in Europe and the abolition of the reserve clause in the U.S.A. that have driven salaries to unprecedented figures; the increasing sports globalization and commodification of sports; the financial challenges numerous clubs face in Europe, and the economic disconnection between American professional sports and the traditional fan base describe the new reality in the world of professional team sports.

The question, though, is how economics interfere with the world of professional team sports. The academic field of professional team sports economics dates back to the middle 1950s. Although a lot has been written ever since, there seems to be a consensus among sport economists that the articles of pioneers such as Rottenberg (1956), Neale (1964) and Sloane (1971) are seminal in the economics of sports. We will briefly refer to these articles, as their authors still prevail in the related literature.

Simon Rottenberg's (1956) uncertainty-of-outcome hypothesis in his article about «*The baseball players' labor market*» posited that, other things being equal, the closer the competition between teams, the greater the interest in the sport and, therefore, the greater the likelihood of total attendance. He also argued that the reserve clause that limited the baseball players' freedom to transfer to other teams was not a necessary condition to maintain competitive balance within a league. He suggested that under free agency the players will be distributed among the teams according to their most productive use and proposed different measures to promote a more equal distribution of playing talent among teams, such as revenue pooling and sharing, salary capping and allocation of teams in big cities.

Walter Neale followed Rottenberg in 1964 with his article «*The peculiar economics of professional sports*». Neale (1964) suggested that the sports industry differs from any other industry in that a single team cannot supply the entire market. In sports, monopoly is not profitable like in other industries, because of the joint production of the sports product. He also described the sources of demand for the sporting competition. Neale argued that demand is produced by spectators in the stadium and television viewers at home for the direct product of the match, but also by newspapers and television companies for the indirect product of the championship and the standings, that produce sales and advertising revenues for them (Neale, 1964).

Finally, Peter Sloane (1971) suggested in his article «*The economics of professional football: the football club as a utility maximiser*» that team owners may not be profit maximisers, but rather try to maximize their utility, which is a function of playing success; average attendance; competitive balance of the league, and a higher after-tax profit than the minimum acceptable.

Sloane also argued that a sporting league and its constituent teams may be viewed as a cartel.

These three articles paved the way and sparked off the interest in the field of sports economics. Issues such as the structural features of professional team sports markets; labor relations; demand and team objectives are the focus of related articles that remain at the centre of academic interest and define the research agenda of professional team sports economics up to date. The objective of this paper is to present the main areas of interest of professional team sports economics and outline the main theories and empirical findings in each area. Furthermore, we attempt to explain the current research agenda that results from professional team sports structure and the changing environment of professional team sports. Finally, the future perspectives of team sports economics are briefly examined on the premise that both economic and social aspects of contemporary team sports should be taken into account in future sports economics research.

## **Content of Professional Team Sports Economics**

The main areas of interest in professional team sports economics are league market structure and team objectives; demand for professional team sports; labor issues; financing, and sports broadcasting. Issues such as government subsidies; the role of sports in economic development; antitrust and competition policy, and college sports in the U.S.A. should be part of a more comprehensive analysis of professional sports economics but are considered beyond the scope of this article.

All five areas of interest analyzed in this paper are described in every sports economics textbook (Cooke, 1994; Downward & Dawson, 2000; Dobson & Goddard, 2001; Li, Hofacre & Mahoney, 2001; Sandy, Sloane & Rosentraub, 2004; Fort, 2006) and are the object of analysis of numerous papers in the related literature. Team sports economics papers are published in various economic and sport management journals and since 2000 in the *Journal of Sports Economics*. A content analysis of the *JSM* (*Journal of Sport Management*) by Mondello and Pedersen (2003) reveals that the highest percentage of articles focused on team performance and payroll and labor market research. The main areas of interest in team sports economics research are briefly presented below.

### **1. League Market Structure and Team Objectives**

As in every economic process, in professional team sports, inputs (talent, coaching) are combined with the capital (stadium) to produce the output

(match) that is sold to customers (ticket holders, TV viewers). Unlike other industries, in sports production does not exist without a competitor. As Neale (1964) argued, there can be no monopoly on the level of the firm (club) in sports, because the firms are mutually dependent. Moreover, in professional team sports the characteristic of the league structure is essential to the production of the sporting product, which is not confined only to the match, but also includes the championship standings effect. Since in most cases there is one professional league for every sport in each country, it has been argued that the league, rather than the firm, is a monopoly, if it is viewed like the single multi-plant firm that supplies the market (Neale, 1964; Downward & Dawson, 2000), or a cartel, if it is viewed as a collective of firms that, by agreement, act as a single supplier to the market (Sloane, 1971; Sandy, Sloane & Rosentraub, 2004). The latter view appears to be more consistent with the evolution of professional team sports as we witness it nowadays, since members of a league pursue more individual interests rather than a perceived common goal. Group behavior, although agreed upon, is not binding if better opportunities for members appear (Downward & Dawson, 2000).

Within this structure, the assumed objectives of professional sports teams have been the object of a debate among sports economists. While in America profit maximization is taken to be the goal of teams, the behavior of sports firms mainly in Europe has led to the conclusion that not all sports clubs are profit maximisers. According to Sloane's (1971) proposed utility function  $U = u(A, P, X, \pi_R - \pi_0 - T)$  subject to  $\pi_R - \pi_0 - T \geq 0$ , the club seeks to maximize its utility subject to a financial solvency constraint. Utility is higher when attendance (A), performance (P), health of the league (X) and a positive difference between recorded ( $\pi_R$ ) and minimum acceptable profit ( $\pi_0$ ) after tax (T) are maximized. A utility maximizing motive seems to be more in line with the behavior of the majority of European clubs and is evident from the acceptance of long-run financial losses, high salaries, inefficiently large squads etc. (Sandy, Sloane & Rosentraub, 2004; Szymanski & Smith, 1997).

Finally, League structure and team objectives are linked to the notion of competitive balance of the teams within a league. The accomplishment of competitive balance is the aspiration of sports economists throughout the history of professional team sports, although no empirical evidence of its benefits on attendance and revenues exists. Professional team sports are characterized by chronic competitive imbalance (Sandy, Sloane & Rosentraub, 2004; Avgerinou, Kalaitzis & Famisis, 2005; Forrest & Simmons, 2002; Morrow, 2004; Fort, 2006).

## **2. Demand for Professional Team Sports**

The theory of demand for professional team sports is intended to explain or predict how the prices and the quantities bought and sold in sports mar-

kets vary in response to changes in economic, sporting and demographic factors (Downward & Dawson, 2000). Questions such as what determines the demand for tickets to a single sporting event and how ticket prices are determined are researched by sports economists. The key short-term factor that attracts customers, whether they are ticket holders or a broadcast audience, is the uncertainty of outcome of an event (Noll, 1974; Sloane, 1980; Forrest & Simmons, 2002; Sandy, Sloane & Rosentraub, 2004; Pinnuck & Potter, 2006), while long-term factors include population; per capita income; the public's familiarity with the rules of the game; the reputation of referees and administrators for integrity, and the public's familiarity with the players, especially the stars (Sandy, Sloane & Rosentraub, 2004). Fort (2006) adds to these factors fan preferences and tastes; price of entertainment substitutes, and fan expectations about the future of the demand shifters. The literature on attendance (comprehensive surveys by Cairns, 1990; Dobson and Goddard, 2001) reveals that economic determinants of demand include income; unemployment; ticket price; transport costs, and price of entertainment substitutes. Sporting determinants of demand are performance (Schmidt & Berri, 2006) and team quality; entertainment; uncertainty of match and season outcome; promotion or relegation of the team, and spill-over effects of team's performance in major competitions, e.g. Champion's League (Simmons, 1996). Demographic factors that influence demand include population size and the percentage of males, while other factors found in models estimating attendance include availability of substitutes (Lee, 2006); geographical distance separating the two teams; weather conditions; TV coverage, and day of fixtures. Although price and income effects are identified as weak influences in the short-term, when longer time horizons are researched in empirical analyses these traditional economic determinants of demand appear to be more significant (Bird, 1982; Borland, 1987; Simmons, R., 1996; Downward & Dawson, 2000; Lee, 2006).

### **3. Financing of Professional Team Sports**

Major teams are nowadays complex businesses, intrinsically concerned with matters of economics and finance (Morrow, 2003). Performance on the field is inextricably linked to financial measures, such as payroll of the players (Szymanski & Kuypers, 1999; Deloitte & Touche, 2001; D & T 2002; Hall, Szymanski & Zimbalist, 2002) and expenses of the club (Avgerinou, Giakoumatos, Konstantinakis & Mountakis, 2006). Financing of professional team sports lends itself to economic analysis from 2 aspects: one is the financing of stadia, where economists seek the appropriate portion of public financing and the other is the financing of the operations of the club. Methods of financing sports operations have changed in the modern era of sports. From the traditional model of finance which relied on spectators; public subsidies,

and sponsors (Andreff & Staudohar, 2000) we witness a shift to a finance model where television; entrepreneurs; selling of merchandising and other services through the internet, (Spais & Avgerinou, 2006) and public offerings of stock are the new sources of finance, with the share of public financing stagnant or decreasing (Morrow, 1999; 2000; Andreff, 1997; Andreff & Staudohar, 2000; Sandy, Sloane & Rosentraub, 2004).

#### **4. Team Sports Labor Markets**

Economic analysis of sports labor markets attempts to shed light on the way players' wages and transfer fees are determined and on how the economic value of individual performance is ascertained. Marginal revenue product theory and bargaining theory are employed in this direction. Traditionally sports labor markets have been described as monopsonistic. However, team sports have experienced a move from players' limited freedom to free agency as a result of institutional arrangements in both US and European sports labor markets. The gradual abolition of the reserve clause in the US and the 1995 Bosman ruling in Europe, have led to a shift from monopsonistic exploitation to bargaining structures and competitive outcomes (Downward & Dawson, 2000; Sandy, Sloane & Rosentraub, 2004). Economic rents previously extracted by teams are now being allocated to players. Increased player power to bargain over their salaries and contracts together with the introduction of pay-television has led to spiraling wages of players in professional team sports. Productivity of each player is observable in team sports in more detail than in any other industry. Empirical evidence in the US (mainly baseball) exists that player salaries nowadays are more in line with their marginal revenue products (MRPs) (Zimbalist, 1992; McDonald & Reynolds, 1994), as opposed to the substantial exploitation of players in the past, who were receiving a small fraction of their MRPs (Scully, 1974; Medoff, 1976). Regarding the exceptionally high salaries of particularly talented players, given the shortage of players with star quality, the crucial issue is whether or not their salaries are commensurate with their contribution to the team's revenues (Downward & Dawson, 2000). Sports economists also examine the effect of players' free agency on the competitive balance of leagues and the impact of new measures such as salary caps. Restrictions of this kind in the labor market have proven indefensible in terms of policies to safeguard competitive balance in leagues (Downward & Dawson, 2000).

#### **5. Sports Broadcasting**

The economic consequences of televising team sports impinge on four interconnected areas: the effect of broadcasting media on alternative sources of

clubs' revenues (e.g. gate attendance); the effect on competitive balance and overall revenues in leagues as a whole; the potential changes in league structure and management, and the long-term characteristics of the sport (Downward & Dawson, 2000). The income from broadcasting has grown dramatically in recent years enabling teams to pay higher player salaries and improve stadia. At the same time it has led to a more profound revenue imbalance between top and bottom clubs in a league. As a result, top clubs that are eager to capitalize on their bargaining power over the media bring about changes in league structure (e.g. formation of the Premier League in the UK, changes in Rugby Football League, attempt of the Superleague creation in Europe etc). A related concern is that broadcasters ask for changes in the organization of the televised sport (alterations in the day and time of fixtures, rules of the game, team mergers, team reallocation etc). Studies on whether television broadcasting reduces or enhances attendance at matches offer mixed results. Some researchers find negative relationship with live attendance (Baimbridge et al., 1996), while others find the two significantly positively related (Zhang et al., 1998; McEvoy & Morse, 2007), based on the argument that broadcast and live demand are complementary goods that raise fan interest.

## **Trends that Affect the Research Agenda**

Differences in the organizational structure between American and European professional team sports have influenced the research focus on the two sides of the Atlantic. Although there are objections to the implications of these differences (Fort, 2000), the research agenda has nevertheless been influenced by them. According to Andreff (2006) the concern for professional team sports in Europe began after the Bosman case (1995). In the pre-Bosman era, European sports economics derived from academic works and debates among sociologists, institutional economists and socio-economists, whereas the demand for such research did not emerge from the private business community but rather from the sport movement itself (Olympic committees, sport federations, leagues), the municipalities and the state. At the same time, in the U.S.A. the need to defend sports in Congress (for exemption from the antitrust laws) and to help decision makers contributed to the extensive analysis of legal issues, labor contracts and revenue sharing (Andreff, 2006).

The current research agenda in professional sports economics seems to be defined by:

### *Differences in organizational structure*

The differences in organizational structure have an impact on the direction and focus of research in professional sports economics. The key characteris-

tics of the two models of professional team sports organization in Europe and U.S.A are summarized in *Table 1*:

**Table 1\*.** *The differences between Europe and U.S.A in professional team sports organization.*

	Europe	U.S.A.
Objective	Utility maximization	Profit maximization
Tools of sport leagues	Promotion and relegation system, no collective measures	Closed leagues, revenue sharing, salary caps, drafts
Geographic allocation of teams	Strong traditional bond to cities	Teams relocate for financial reasons
College sports	Virtually non existent	Important role in sport economy
Players' unions	Weak	Strong negotiating power

\* *For a similar classification see in Howard & Crompton (2002), Avgerinou, Kalaitzis & Famisis (2005) and Andreff (2006).*

It is evident that the European professional team sports organization model, notwithstanding sport's commercialization and commodification, still preserves a traditional bond to the community and the essence of sporting competition. In the U.S. teams have been able to coerce lavish subsidies from local governments by threatening to relocate and have indeed relocated in cases that the offer from another city was more attractive. At the same time the four major sports leagues are closed (new teams cannot enter the league based on sporting performance) and economic tools to ensure sport franchises' financial stability have been developed. Within this context, American team sports economics specialize in competing leagues, antitrust policies, franchise relocation, the impact of salary caps and luxury taxes, rookie drafts, racial discrimination, players' agents, college sports and revenue sharing in baseball, ice hockey and American football. European team sports economics concentrate on open leagues, the promotion and relegation system, win maximizing teams and the new models of finance in professional sports (Andreff, 2006) mainly in football.

*The changing environment of professional team sports*

Professional team sports are affected by changes in the social, legal and economic environment. Some examples of the changing environment in Europe are:



- the deregulation of the sporting labor market due to the Bosman ruling in 1995 that enabled free movement of players within the European Union,
- the effects of hooliganism, one of them being the demand for conversion of all football grounds in England to all-seated, safe stadia due to the Taylor report in 1990 (Hamil, Michie & Oughton, 1999),
- the club licensing system of UEFA, whose criteria football clubs have to meet if they wish to participate in European competitions (beginning in 2004-05),
- the restriction of traditional sources of capital in the event of a financial crisis, with the enforcement of competition laws and rules against the provision of public subsidies within the European Union (Szymanski & Zimbalist, 2005),
- supporter criticism regarding particular aspects of the commodification of sports, the most recurring being the business-focused introduction of the term “customer” to describe the supporter and the failure of clubs to live up to their promise that commercialization of the game will improve the quality of the fan’s experience (Giulianotti, 2005).

North America faces similar challenges, namely the abolition of the reserve clause and the economic divorce between professional sports and the traditional fan base, the working and middle class families (Howard & Crompton, 2002) etc.

Researchers adapt their objectives to the new reality that professional team sports face. This is demonstrated by the economic analysis of the new sources of finance, such as the stock market and the media, and their implications, and the study of the consequences of the talent labor market’s deregulation on financial and competitive measures.

## Future Developments

As the core issues of interest of professional team sports economics receive consistent attention from researchers throughout the years, one can expect that developments will follow what Andreff (2006) calls a path dependence assumption, i.e. follow the past. But the research agenda in sports economics is also socially determined. It responds to some sort of social demand for developing topics with respect to particular current economic issues emerging in sports (Andreff, 2006). Thus, the new perspectives in sports economics will depend on the current and future economic concerns that emerge in sports. The financial challenges faced by many team sports clubs call for research on measures that alleviate these problems but at the same time preserve the social character of sports. Europe and America can draw from each

other's experience and learn helpful lessons (Howard & Crompton, 2002; Szymanski & Zimbalist, 2005). Financial innovations such as stock market listing, strategic media investment, securitization, player sale-and-leaseback arrangements and stadium naming deserve more research (Gerrard, 2006). Interestingly, Morrow (2000) wonders whether the current form of stock exchange listed companies in some countries is the appropriate vehicle for contemporary football clubs, as football clubs are classic stakeholder organizations. He investigates the development of an ownership structure that can more fully capture both the economic and social aspects of contemporary football clubs. Sandy, Sloane & Rosentraub (2004), with the American professional sports structure in mind, advocate that sports are an important part of every society and if the structures fail to meet the needs of fans, such structures need to be changed so that fans can articulate their demands through an unfettered marketplace. Andreff (2006) adds the phenomena of increasing corruption in professional sports, in the form of embezzlements, match fixing and money laundering to the future research agenda.

## Conclusions

Sports economics dates half a century. From the seminal articles of Rotenberg, Neale and Sloane in the 1950s and 1970s to the modern highly commercialized professional team sports era, the research objectives are defined by economic issues associated with professional team sports. On both sides of the Atlantic, market structure and team objectives; demand, labour markets; financing, and sports broadcasting are the main areas of interest, although sports economics is not confined to these subjects. The organizational structure of team sports and the new challenges arising in a dynamic environment reshape the research agenda. Future developments in economic analysis of professional team sports should respond to both social and economic concerns.

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