

## ECONOMICS OF SPORT

### EDITOR'S INTRODUCTION

*John Vrooman*

*What I know most surely about morality and the duty of man I owe to football.*  
—Camus

Sooner or later the fundamental questions of Western philosophy come down to love or money, and the same is true for the world's game of football. Cosmic questions of Eastern thought ultimately seek their resolution through optimum balance, and the same is true for the economics of sport. The challenge for economic theory is to find a dynamic balance between love and money necessary to analytically grasp the passionate and pragmatic complexities of the beautiful game. The games themselves require balance in that competition must be tempered at some point, because even the greatest club is only as strong as its weakest opponent. As a result, the peculiar economics of sport deals with a unique dualism of symbiotic competition [Neale, 1964]. This symbiosis is why fierce Glasgow rivals Rangers and Celtic have jointly been called the *Old Firm* for the last century. The world's games are ready-made laboratories. Every stadium is a bell jar, where the intensity of bottom-line business competition is matched between the lines on the pitch. Objective functions come alive as owners readily reveal their preferences for winning at-all-cost over profit maximization. Detailed information about every player and every result is known by every school boy and every corner bookie. Every statistic has a known face, and every face has a known salary. Throughout the world, sports leagues have evolved with vastly different sets of cultural rules—the range of regimes is robust. Leagues seek balance between the yin of solidarity and the yang of meritocracy. There is constant conflict between breakaway power of stronger individual clubs and the tradition-bound bias of governing agencies, acting as self-appointed and often self-serving protectors of the game.

The economics of sport is celebrating the golden anniversary of its origin in a seminal paper by Rottenberg [1956], where he presages the Coase theorem [1960] in a cogent argument about the impact of free agency on the baseball players' labor market. According to Rottenberg's *invariance proposition*, free agency would yield the same talent distribution as the reserve system in American baseball. The difference was that free agency would weaken monopsonistic exploitation of players trapped in the reserve system, and allow them to be paid their marginal revenue product. The theoretical foundations of the economics of sport are found in the elegant mathematical proofs of El Hodiri and Quirk [1971], in public policy awareness of Noll [1974], and for Europe, in Sloane's [1969] early discussion of the European football market. The modern awakening of sports economics came when Quirk and Fort [1992] published a popular version of Quirk's early models, followed by two separate adaptations of the model to the new realities of the rapidly changing American sport-scene [Fort and Quirk, 1995; Vrooman, 1995].

At the same time, there was a strong revolutionary wind blowing through Europe. In the wider market context of European unification in 1992, European footballers received their free agency in the European Court's famous *Bosman* decision in 1995. The American models should have been good to go: just substitute the transfer system for the reserve system, and the *invariance proposition* could be taken global. The problem is that there is only one Major League Baseball (MLB) in North America, but there are several premier football leagues in Europe, and each is nationally defined as a segmented piece of the European Union. In the midst of this, the English Premier League (EPL) broke away from its Football League moorings in 1992. A wider breakaway

of elite teams in Europe was averted in 1992, when UEFA converted its post-season Champions Cup into the Champions League. Football revolution was in the air, because of the underlying explosion in media revenues throughout Europe. Given the torsion of big-time TV money freely pouring into open labor markets, still constrained by closed leagues, European football was being torn apart into a great divide of rich and poor clubs. League-talent distributions had become so distorted that a season's outcome was certain before kick-off. It was evident that the economics of sport needed retooling to fit the twisted open/closed market reality of post-*Bosman* European football.

This second *Special Issue* on the "Economics of Sport" is comprised of six papers, three each from Europe and North America. The four authors who were also in the first issue [2000], have since been involved in one-sided debate about the relevance of the invariance principle for the open labor markets of post-*Bosman* European football [Szymanski and Kesenne, 2003]. Some criticism of closed American models is well-taken, but most of the open-market distinctions made in European theory do not make any difference, even in the reality of European football. The cross-fertilization of ideas was productive, as can be seen from the first response from the two American theory papers in this issue. As the founder of sports economic policy, one of two new dream-team members examines the policy implications of cartelization of media rights fees under the wide range of regimes found in Europe, and the second new member reviews the rich evidence on pay and performance in the European football players' labor market. In spite of minor theoretical differences, the four papers that deal with the post-*Bosman* reality of European sports leagues all agree that UEFA's Champions League distorts domestic league competition, and three papers propose that a Super League is the next logical step toward the unification of European football.

John Vrooman revisits the *invariance proposition* after a decade of straw-man criticism, with adaptations for open leagues, sportsman owners and champion effects. If club owners are win-maximizing sportsmen then the invariance proposition is irrelevant, regardless if the markets are open or closed, and revenue sharing and salary caps can be used to effectively engineer competitive balance. Financial results for the Big Five leagues are comparatively analyzed during the media rights revolution throughout Europe. It is clear that the real world economics of European football is distorted by an uncertain promise of the Champions League, and that European football owners are win-maximizing sportsmen. Empirical evidence shows that EPL has become increasingly imbalanced since *Bosman*, and that season-to-season continuity in the National Football League (NFL) has become a random walk. The economic solution for the great divide of European football is to let the top European football clubs break away as a closed Super League, and then unify the divided football base with open international club leagues. This proposal leads to a self-governing thirty-team European Super League based on the NFL as its solidarity model.

Stefan Szymanski questions whether the Coase Theorem is relevant for economic policy in general and sports leagues in particular. He cites mixed evidence from free agency in MLB and the amateur draft in NFL for and against the Coasian *invariance principle*, which holds that playing talent will be efficiently allocated regardless of its ownership and league rules. In English football leagues, central planners would equate the marginal revenues of clubs, while clubs themselves equate marginal revenue product. Hence there is a bias toward inefficient competitive balance. Empirical evidence shows that the attendance maximizing number of wins is much more unequal than what is observed in practice. European football leagues are more imbalanced than North American leagues, but given fan acceptance, it is not clear that increased competitive balance will lead to greater attendance. This being said, it has become clear that Champions League in its current format has led to increased imbalance in European football, which would best be remedied with a more balanced European Super League.

Rodney Fort and James Quirk use a rational expectations (RE) approach to update the competitive talent market (CTM) "warhorse," which has carried every league equilibrium model on its back since El-Hodiri and Quirk [1971] and Quirk and El Hodiri [1974]. CTM assumes that the choice of wins and the choice of talent are the same. League equilibrium and the revenue sharing invariance proposition are examined for the National Football League and Major League Baseball.

The short NFL season of ten home games implies that revenues are driven by season-ticket sales based on quality of home team. In the case of the NFL, rational expectations equilibrium exists and the invariance proposition holds. Pooled revenue sharing has no impact on league competitive balance, and payrolls are reduced by the percent of revenue shared. The longer season of 81 home games in MLB allows single-game tickets and split packages, which introduce the quality of the visiting team into revenue functions. In the MLB case the RE solution exists but the invariance proposition does not hold. These findings lead to the conclusion that leagues are organized to maximize league-wide profit.

Stefan Kesenne explores the implications of a two-country two-team model of win-maximizing owners for post-Bosman European football. In the pre-Bosman case of nationally protected labor and closed product markets, the wage rate should be predictably higher in the larger country. Under open international labor markets and closed product markets, the competition gap between large and small countries widens, while competitive balance within both countries remains the same. Wage rates rise in the small country and fall in the large country. These findings are consistent with evidence from post-Bosman labor market deregulation, where talent is leaving big clubs in small countries and creating wider gaps between large and small countries. In the hypothetical case of open labor and open product markets, in the form of a European Football League, competitive balance between top clubs should improve. If open labor markets and closed product markets lead to inter-league imbalance, then UEFA's Champions League only adds to the problem. The solution is to open the product market by creating international European divisions of the best European clubs.

Roger Noll examines the media revolution for European football over the last two decades. On the demand side, technological change has allowed for convergence of services through competition, but this ultimately depends on national public policy, where commercial broadcasting was the anomaly well into the 1980's. Sports rights fees are higher for pay-per-view over free-to-air, because of inelastic demand and quasi-public nature of sporting events with zero-marginal cost. Public welfare is improved if program quantity increases outweigh consumers paying for programming that used to be free (siphoning). On the supply side, the important policy question is centralization or decentralization of broadcast rights. The common argument that centralized selling leads to competitive balance is false, because league revenue maximization as a cartel yields the same competitive balance as separate negotiations of decentralized clubs. TV revenue sharing does not change the allocation of talent, but the Champions League increases imbalance in domestic leagues. Increased centralization of rights in the name of competitive balance will ultimately harm consumers by restricting choices and increasing prices.

Bernd Fricke reviews the evidence from the European football players' labor market on pay and performance, transfer fees, career and contract lengths and discrimination. Recent studies go beyond the traditional estimation framework of experience-earnings profiles to find a positional pay hierarchy from goalkeepers through defenders, mid-fielders to forwards, who receive 30 percent above the goalkeeper base. After *Bosman*, transfer fees for out-of-contract players have been replaced by bonus payments. The length of time remaining on a contract directly affects the fee, because there is no fee when the contract expires. Bundesliga career duration is four years, and average contract length has increased from 2.5 to three years following *Bosman*. Evidence shows that discrimination does not persist in competitive football labor markets, and that players are paid their marginal revenue product. Foreign-born players increased above 50 percent of Bundesliga in 2002, and there is a premium for foreign players in skilled positions. Empirical research in European football is exploding, because of the open labor-market laboratory and abundant of measures of performance.

These six papers collectively seek optimum balance between love and money in the economics of sport. The English Premier League promotes itself as "the greatest show on earth." Welcome to the show.

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