

**THE ORGANIZATION OF EUROPEAN FOOTBALL
AND THE COMPETITIVE BALANCE
WITHIN AND BETWEEN NATIONS**

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¹ We wish to thank Prof. dr. W. Pauwels for helpful comments. All remaining errors are mine.

Abstract

In this paper, we try to show that, apart from the negative impact of the Champions League, the growing gap between the Big 5 football countries in Europe and the smaller countries is caused by the deregulation of the European player labour market without deregulating the European football product market. Both the growing competitive balance between and within the national leagues can be restored by opening the European football market. A simple 2 country / 4 club model with quadratic revenue functions is specified to prove this argument.

Labour Mobility, Industrial Policy, Regulation, Sports Economics

JEL classification: J6, L52, L83

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1. Introduction

One of the major concerns in European Football over the last decade is the growing gap between the performances of clubs in the 'Big Five' countries, England, France, Germany, Italy and Spain, and the smaller football countries in Europe. This increasing imbalance has been often blamed on the Bosman verdict by the European Court of Justice in 1995. This verdict abolished not only the transfer system, which limited the free movement of end-of-contract players, but also the so-called 3+2 rule, which limited the number of foreign players fielded. By this verdict, a more or less free, and competitive, player labour market was established in Europe. However, the product market, which is the market of football matches and championships, is still nationally protected. The top clubs in the small countries have to play in their poor national championships, with an average of less than 15000 spectators per match and small amounts of television and commercial money, while the top clubs in the Big

Five profit from their lucrative championships, which regularly sold-out stadium of 40000 spectators and the huge amounts of money from television, sponsoring and merchandizing.

Tabel 1. Number of clubs in Semi-finals of Champions League

	1994-1998	1999-2003
England	1	3
France	4	0
Germany	3	4
Italy	5	4
Spain	2	8
Other	5	1
Big Five share	75 %	95 %

Source: Bill Gerrard, 2003

In table 1, one can see that the semi-finals of the European Champions League after 1998 are almost monopolized by the clubs from the Big Five. The gap has widened by the financially very awarding European Champions League, where only the best ranking clubs in the national leagues can participate. The top clubs of the large countries gain the largest amounts of money as they always survive the first rounds and make it the quarter or semi finals (see also Moorhouse, 2004). Another negative consequence of the organization of the European Champions League is that also the

competitive balance *within* the national leagues becomes more unbalanced, particularly in the small countries. The reason is that the amounts of money they can make, even in the first rounds of the Champions League, are very large compared with the size of their budgets. The cumulative effect of more wins, more money and more wins widens the gap between the top teams and the average teams within nations. The best example of this imbalance is presented by Scottish top league, where the two clubs from Glasgow, Celtic and Rangers, although born rivals, nicely divide the domestic championships among themselves. Unfortunately, their domestic dominance is accompanied by their European marginality.

It goes without saying that Europe, and many of its football fans, are not happy with this situation. The best clubs in the small countries, like Ajax or PSV in Holland or Anderlecht in Belgium, that have been European top clubs in the past, must compete with Spain's Real Madrid and England's Manchester United for the best players on the European labour market, but they cannot compete with these clubs on the European product market. Given the budget of Manchester United, which is 10 times as high as the budget of Anderlecht, it seems obvious that all the best players are leaving the small countries, running after the big money. Even if a small-country club like Porto manages to win the European Champions League in 2004 with a few well-performing players, Porto will not be able to keep these players when they are offered very high salaries by the rich European top clubs. The exodus of the best players out of the small countries, even out of France, as the weakest country of the Big Five, is the most dramatic implication of the disequilibrium that has been created in Europe by deregulating the labour market without liberalizing the product market.

The solution to this problem is not to turn the European clock backwards by trying to restrict again the international movement of players, which is what some federations and clubs are aiming at. The process of European unification cannot be stopped and there is no reason for sport to be (once again) an exception to the rule. The natural monopoly characteristics or the peculiar economics of professional sports, as Neale (1964) has called it, does not justify any obstruction to the international mobility of players. Also the arguments based on the claim that a professional sports club is not a regular business company, or that spectator sport is not an economic product but a cultural experience, are missing the point. European football will benefit from the international mobility of players because players will play in the team where their productivity reaches the highest level. Nor is it a solution to reduce the number of teams in the small countries' first division, which is what the richer clubs prefer as they hope to monopolize the national football money. Apart from the fact that most supporters will hate it, this operation would only marginally narrow the budget gap with the European top clubs. If Belgium wants to reach the same number of inhabitants per team as England (see table 2), it has to increase its birth rate dramatically or to reduce the number of its first division teams to 4 or 5 teams. Moreover, a reduction of the number of teams by relegation or mergers will possibly enlarge the local markets or the drawing potential of the remaining clubs, but it does not affect the size of their national market.

As can be seen in table 2, the local market of a European top club like Liverpool is not larger than the local market of Brussels, but FC Liverpool has a larger local drawing potential of spectators than FC Anderlecht. However, this local market effect does not explain the difference in budget size. FC Liverpool's budget is almost 7 times the budget of FC Anderlecht. This can only be explained by the size of the

national market of Liverpool (England), which is almost 5 times as large as the national market of Anderlecht (Belgium). It is not that football is less popular in Belgium than in England. The per capita match attendance in Belgian's first division is even 10 % higher than in England's Premier league.

**Tabel 2. Liverpool versus Anderlecht
England's and Belgium's highest national divisions**

	Liverpool	Anderlecht (Brussels)	ratio
Inhabitants	500 000	1 000 000	0.5
Attendances	40 000	20 000	2.0
Budget(euro)	150 m	21.5 m	7.0
	England	Belgium	ratio
Average Attend	35 000	10 000	3.5
Inhabitants	48 million	10 million	4.8
Average Budget	77 m euro	6.5 m euro	12
Inhabit / team	2 400 000	560 000	4.3
Number of teams	20	18	1.11
Number of matches	380	306	1.24
Attend / inhabit	0.277	0.306	0.9

What these figures suggest is that the larger budget of Liverpool is primarily caused by its larger national market. Because teams compete in the national championship, they enjoy the national media coverage and exposure, and the money that comes with it through television and commercial revenue. Moreover, in many European countries, national broadcast rights are pooled by the league and redistributed among all clubs (see Andreff and Bourg, 2003).

The question is if the best solution to this problem is not to liberalize the product market. If we are in the process of building a European Union, with one currency, with free trade of good and services, and a free move of capital and labour, the professional sports industry cannot stay behind. It is in the interest of the European football industry that there is an optimal allocation of resources, including professional football players. So, the European football association UEFA should consider the creation of European football divisions on top of the provincial and the national divisions. In each country, a new team starts at the bottom, which is the lowest provincial division, and can move up to the first provincial division. If it wins the championship in the first provincial division, the team is promoted to the lowest national division so that it can climb to the first national division. With the new European identity, it is just plain logic that the champion of the first national division should be promoted to the European divisions and leaves the national championship. Some argue that one (US-style) closed European major league should be organized, because of its attractiveness for risk-averse investors. Others argue that promotion and relegation should still be possible, because it creates better incentives to perform (for a discussion see Noll, 2002). Promotion and relegation are also possible in system where each country keeps a fixed number of teams in the European divisions,

according to the size of the national market, its drawing potential and the FIFA-ranking (see Hoehn and Szymanski, 1999).

In this paper, we try to analyse, using a simplified 2 country / 4 team model with quadratic revenue functions, how the competitive balance changes if one moves from national labour and national product markets to a scenario with a national product market and an international labour market and, further on, to an international product and labour market. To the best of our knowledge, most studies, dealing with this problem, start from the hypothesis that clubs are profit maximizers (see Hoehn and Szymanski, 1999; Haan, Koning and Van Witteloostuijn; 2002; Provost, 2003). However, Sloane (1971), among others, assert that European football clubs behave rather like utility maximizers. In this model, we start from the more operational win maximization model (see Kesenne, 2000), assuming that European football clubs are primarily interested in winning, subject to the constraint that profit are non-negative. In section 2 the model specification is given. Sections 3 to 5 analyse the three scenarios, from closed labour and product markets to open labour and product markets. Section 6 concludes.

2. The Model

Assume that there are 2 countries: a is the large country with national market size m_a and b is the small country with market size m_b . There are 2 clubs in each country: club 1 is the large market club and club 2 is the small market club. The national

markets are divided over the two clubs' local markets, so that $m_a = m_{a1} + m_{a2}$ and $m_b = m_{b1} + m_{b2}$ and $m = m_a + m_b$. Also the following inequalities hold:

$$\begin{aligned} m_a &> m_b \\ m_{a1} &> m_{a2} \\ m_{b1} &> m_{b2} \end{aligned} \tag{1}$$

The season revenue of a club depends on three important factors: the drawing potential of the club, or the size of the market, the winning percentage and the uncertainty of outcome. So, for each club i in country a we specify the revenue function as follows:

$$R_{ai} = (m_{ai} + m_a / 2)w_{ai} - \beta w_{ai}^2 \quad \text{same for country } b \tag{2}$$

The revenue of a club, or its drawing potential for money, does not only depend on the number of stadium spectators in its local market but, increasingly so, on broadcasting and commercial revenue like sponsoring, merchandizing and licensing. Because these revenue sources are rather determined by the size of the national market, they are captured by m_a divided by the number of clubs.

The winning percentage of each team i in country a is indicated by w_{ai} and is defined by the logit contest success function:

$$w_{ai} = \frac{x_{ai}}{x_{a1} + x_{a2}} = \frac{x_{ai}}{x_a} \quad \text{same for country } b \tag{3}$$

where x_{ai} is the number of playing talents of team i in country a , and x_a is the supply of talent (or the sum of talents) in country a . The initially given supply of talent in each country can only be changed through international player mobility. The total supply of talent in both countries together is assumed to be constant and equal to x . Initially, the winning percentage has a positive effect on club revenue. Supporters prefer to watch a winning team, but also care for a more or less balanced competition. The impact of the uncertainty of outcome is captured by the decreasing marginal returns of the winning percentage in the quadratic revenue function. So, if the team becomes too strong compared with its opponents, the winning percentage can have a negative effect on revenue. The positive parameter β reflects the preference of the public for a close competition, and is assumed to be the same for every team.

On the cost side, we consider the player labour cost as the sole cost of production, which is not an unreasonable assumption if there exists a strong positive correlation between the capital cost and the number of playing talents in a club (see Szymanski and Smith, 1997).

If professional football clubs in Europe are win maximizers rather than profit maximizers, we assume that all clubs are maximizing their winning percentage under the breakeven constraint, i.e. total revenue equals total cost. Under this hypothesis, the demand curve for talent of a club is given by the average revenue function because a club spends all its money on playing talent.

In the following sections, we consider three different scenarios and compare salary level and competitive balance *within* and *between* nations, starting from the past, with its closed national football and player markets, and moving over the present, with an open international player market and closed national product markets, to the future, with an international player and product market.

3. National product markets and national labour markets.

The starting point is the scenario of a closed league in each country. Both the product market and the labour market are nationally protected; each club plays in its own national championship and there are no international transfers of players. In that scenario, we start from the basic assumption that the initial competitive balance *between* the two nations is given by their relative market size:

$$\frac{x_a}{x_b} = \frac{m_a}{m_b} \quad (4)$$

which implies that both countries are more or less comparable in terms of welfare level, government policy, youth training facilities etc... If clubs are maximizing their winning percentage under the breakeven constraint, and the winning percentage of a club depends also on the number of playing talents of its opponent, a game theoretic approach applies. Assuming that clubs do not cooperate and that a unit cost of talent c_a , is given, the Nash-Cournot equilibrium in country a can be found at the point of intersection of the two reaction curves:

$$\begin{aligned} \frac{(m_{a1} + m_a / 2)}{x_a} - \beta \frac{x_{a1}}{x_a^2} &= c_a \\ \frac{(m_{a2} + m_a / 2)}{x_a} - \beta \frac{x_{a2}}{x_a^2} &= c_a \end{aligned} \quad \text{same for country } b \quad (5)$$

From these equations, the competitive balance *within* each national league can be calculated as:

$$\begin{aligned} \frac{x_{a1}}{x_{a2}} &= \frac{\beta + (m_{a1} - m_{a2})}{\beta - (m_{a1} - m_{a2})} \\ \frac{x_{b1}}{x_{b2}} &= \frac{\beta + (m_{b1} - m_{b2})}{\beta - (m_{b1} - m_{b2})} \end{aligned} \quad (6)$$

which shows that the club with the largest local market has also the best performing team.

If the player labour market in each country is competitive, the market clearing salary level per unit of talent can be found. With a given supply of talent in a closed labour market, the equilibrium salary levels in countries *a* and *b* are:

$$\begin{aligned} c_a &= \frac{2m_a - \beta}{2x_a} \\ c_b &= \frac{2m_b - \beta}{2x_b} \end{aligned} \quad (7)$$

These expressions show that the salary level is negatively related to the supply of talent, and positively to the size of the national market which determines the demand for talent. Also, the higher the supporters' preference for a balanced competition, the lower will be the equilibrium salary level. Based on ratio (4), one can also derive that:

$$c_a > c_b \quad (8)$$

which means that salary level per unit of talent in the large country is higher than the salary level in the small country, notwithstanding the fact that a country's (innate) talents are assumed to be proportional to the country's market size, and that both countries show the same preference for a balanced competition.

4. National product markets and international labour market

In this second scenario, the labour market is deregulated so that players can move freely to the club that offers the best salaries, but the national product markets are still closed. This resembles the post-Bosman period in the European Union, where unlimited international transfers are possible in the common player labour market.

With a given unit cost of talent c , the reaction functions are now given by:

$$AR_{a1} = AR_{a2} = AR_{b1} = AR_{b2} = c \quad (9)$$

where c is the unit cost of playing talent in the common market.

A first important question is how the competitive balance *between* the nations is affected by the deregulation of the labour market. From (9), one can derive that also:

$$AR_{a1} + AR_{a2} = AR_{b1} + AR_{b2} \quad \text{or} \quad \frac{2m_a - \beta}{x_a^*} = \frac{2m_b - \beta}{x_b^*} \quad (10)$$

so that the new competitive balance *between* the two countries becomes:

$$\frac{x_a^*}{x_b^*} = \frac{2m_a - \beta}{2m_b - \beta} > \frac{x_a}{x_b} \quad (11)$$

Comparing (11) to (4), it is clear that the gap between the large and the small countries has widened by the deregulation of the player labour market. This process has been observed in European football after the Bosman verdict in 1995. Many playing talents left their team in the small countries and moved to a rich team in the large countries.

A second question is how the competitive balance *within* each national league is affected by the liberalization of the labour market. Because of the open player market, the supply of talent in each country has now changed to x_a^* and x_b^* . Starting again from (9), one finds the same competitive balance as in the previous scenario, so that:

$$\frac{x_{a1}^*}{x_{a2}^*} = \frac{x_{a1}}{x_{a2}} \quad \text{and} \quad \frac{x_{b1}^*}{x_{b2}^*} = \frac{x_{b1}}{x_{b2}} \quad (12)$$

It follows that *within* the large and the small country the competitive balance is not changed by the deregulation of the player labour market. This does not sound unreasonable because the competitive balance depends basically on the relative size of the clubs' markets. If a small country loses its best talents, a competitive labour market in that country guarantees that the 'second best' talents are attracted by the large market clubs in that country.

One might object that in a few small European countries a worsening of the competitive balance during the last few years has been observed. However, this

phenomenon is caused by the existence, and the recent reorganization of the European Champions League where only the top clubs of the small countries can participate and gain amounts of money that are very high compared with the average budgets of these clubs. Depending on the success in the Champions League of clubs like Belgium's Anderlecht, the club's budget can be increased by more than 50 %.

A third question is how the (international) market clearing salary level per unit of talent is affected by deregulating the labour market. This salary level c^* can be derived as:

$$c_a > \frac{2m_a - \beta}{2x_a^*} = c^* = \frac{2m_b - \beta}{2x_b^*} > c_b \quad \text{or} \quad c^* = \frac{m - \beta}{x} \quad (13)$$

where m is the sum of $m_a + m_b$. As could be expected, a comparison with the results in (7) shows that the market clearing salary level per unit of talent comes down in the large country and goes up in the small country.

This does not necessarily imply that also the average player salary level in the small countries increases. The small countries have lost their most talented players to the large countries so that, with an increased unit cost of talent, the average player salary level should have stayed more or less the same. However, after the Bosman verdict, most small countries in Europe experienced an increase in average player salary, which has caused serious financial problems, and the bankruptcy of higher division clubs in countries like Belgium and Holland.

Also, the observed increase in the top players' salary level in the Big Five after the deregulation of the labour market by the Bosman verdict is not in contradiction with

the result of this model. This salary rise was caused by the huge increase in television rights and commercial revenue from the European Champions League.

5. International product market and international labour market

In this third scenario, not only the labour market but also the product market is liberalized. Assume that the opening of the European product market means that the winners in the first national divisions are promoted to the new created European division. Because now these teams can also compete on the product market, the variables and parameters of the revenue functions change. In revenue function (2) the size of the national market m_a has to be replaced by the size of the international market m , which is the sum of m_a and m_b , because these clubs can benefit from the large amounts of European television and commercial revenue. In revenue function (2), also the winning percentages change, because the top clubs play only against each other in the European division. For the 2 top clubs of the countries a and b , the revenue functions become:

$$\begin{aligned}
 R_{a1} &= (m_{a1} + m/2) \frac{x_{a1}}{x_1} - \beta \frac{x_{a1}^2}{x_1^2} \\
 R_{b1} &= (m_{b1} + m/2) \frac{x_{b1}}{x_1} - \beta \frac{x_{b1}^2}{x_1^2}
 \end{aligned} \tag{14}$$

where $x_1 = x_{a1} + x_{b1}$. Deriving the average revenue functions and solving the two reaction equations, one finds the competitive balance between the two top clubs:

$$\frac{x_{a1}^{**}}{x_{b1}^{**}} = \frac{\beta + (m_{a1} - m_{b1})}{\beta - (m_{a1} - m_{b1})} \quad (15)$$

Comparing solutions (15) and (6), it can be derived that the competitive balance between the top clubs in the European division is more equal than in the two previous national divisions if the following conditions hold:

$$\begin{aligned} m_{b1} &> m_{a2} \\ m_{a1} - m_{b1} &< m_{b1} - m_{b2} \end{aligned} \quad (16)$$

The first condition states that the market size of the large club in the small country is larger than the market size of the small club in the large country, which is a plausible assumption for Europe. Indeed, the markets of Anderlecht or Ajax Amsterdam are larger than the markets of many Premier League teams in England. Note that this relative market size is not necessarily reflected in the relative size of the budgets of these clubs, because the budget is also determined by the size of the international market of that club, as indicated by revenue functions (14).

The second condition states that the difference between the market sizes of the large and small market clubs in the small country is larger than the difference between the market sizes of the top clubs. Also this condition is clearly fulfilled in European football, although, this is again not reflected in the budget sizes of these clubs.

Another advantage of the deregulation of the European product market is that also the national championships become more balanced after the clubs with the largest markets have left the first national divisions. As a result, a more tense competition in both the European division and the top national divisions can be expected if the

football product market opens up after the deregulation of the player labour market in Europe.

In this scenario, also the market clearing salary level can be found which is:

$$c^{**} = \frac{1.5m - \beta}{x} > c^* \quad (17)$$

This result shows that the equilibrium salary level per unit of talent in the European division is higher than the salary level in the previous scenario.

However, the average salary level in a new created European division will probably be lower than what is paid now to European top players in the Big Five, because of the extra revenue of the European top teams from the Champions League (see Solberg and Gratton, 2004).

6. Conclusion

If it true that the deregulation of the European player market, by the Bosman verdict of the European Court of Justice in 1995, has widened the gap between the budgets and the performances of the football teams in the large countries compared with the clubs in the small countries, the solution to this problem is not to turn the clock backwards and restrict the free movement of players in Europe, or to reduce the number of first division clubs. This paper shows that a better solution is to open the product market for European football by creating one or two European divisions, where the winners of the national championships in each country meet. At the same time, the European Champions League, which is seriously damaging football in

Europe, can be abolished. This reorganization of European football will narrow the gap between the football nations and increase the competitive balance between the European top teams. However, it is to be expected that the European top clubs in the large countries will oppose the abolition of the Champions League in favour of a European Major League. The reason is that they believe to make more money by staying in their rich national championship and, on top of that, taking all the money of the Champions League. Even if this is correct, and the financial potential of a European Major League is underestimated, it is the responsibility of the European Commission to stop the tendency of the richest clubs to monopolize the football industry in Europe. It is the responsibility of the European Commission to continue its efforts to establish an open common market in Europe, also in sports business.

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