COMPETITIVE BALANCE BETWEEN NATIONAL LEAGUES IN EUROPEAN FOOTBALL AFTER THE BOSMAN CASE

by Trudo Dejonghe* – Wim Van Opstal**


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Introduction

On December 15th 1995 the European Court of Justice in Luxemburg declared in the Bosman Case that the existing transfer system in the European Union (EU hereafter) was in conflict with article 39 of the EC-Treaty. Advocate-general

* Department of Business Studies, Lessius University College KULeuven. E-mail: trudo.dejonghe@lessius.eu.
** Federal Planning Bureau; Department of Social Work, Leuven University College, and HIVA - Research Institute for Work and Society, University of Leuven.
1 We thank Sofie Cabus and Bart Capéau for helpful discussions. All remaining errors remain our sole responsibility.
2 Court of Justice, December 15th 1995, Case C-415/93, in Reports of Cases before the Court, 1995, 4921. Article 39 (ex Article 48) stated «1. Freedom of movement for workers shall be secured within the Community. 2. Such freedom of movement shall entail the abolition of any discrimination based on nationality between workers of the Member States as regards employment, remuneration and other conditions of work and employment. 3. It shall entail the right, subject to limitations justified on grounds of public policy, public security or public health: (a) to accept offers of employment actually made; (b) to move freely within the territory of Member States for this purpose; (c) to stay in a Member State for the purpose of employment in accordance with the provisions governing the employment of nationals of that State laid down by law, regulation or
Carl Otto Lenz called for the abolishment of the transfer system in football, on the ground that it «infringes the player’s freedom of movement» for one club to demand payment from another before permitting the player to change employers. He added that the European Football Federation (hereafter UEFA) had no right to limit the number of foreign players that a team can put on the pitch.

Ever since then, sports success in European football is becoming concentrated in some countries. The bigger market leagues such as England, Spain, Italy, Germany and France, also known as the Big 5, are increasingly dominating international competitions. More recently, teams from Russia and Ukraine are becoming the main non Big 5 opponents. Some former historical major teams such as Ajax Amsterdam, RSC Anderlecht or Celtic Glasgow to mention some, are demoted to secondary teams on the international forum.

In this article we provide theoretical explanations and empirical evidence on the evolution of competitive balance between national leagues in European Football after the Bosman Case. Changing structures towards an open labour market in separated product markets resulted in a competitive disadvantage for smaller market leagues and their teams. Many sports economists, however, argued in the nineties that the changing conditions in the labour market would have no impact on competitive balance and the distribution of player talent. They used arguments taken from US cases but neglected the typical structure of European professional football. These same sports economists argued later on that a European Football League with characteristics of the American professional sports league model would be the solution for concentration tendencies in European football.

On the other side of the spectrum, other sports economists argued that an American model with cross-subsidization is not compatible with the European approach towards sports and the introduction of an open labour market would result in a concentration of talent into the Big 5 as well as more recently in Eastern European leagues with «new money». They stand for a limitation of the openness of the labour market.

This article is structured as follows. First, we explain the Bosman Case and provide an overview of the discussion whether it would have caused adverse effects on competitive balance between national leagues in European football. Next, we show that there are some structural differences between US and European league structures, explaining why predictions on the competitive balance did not come true. Moreover, structural changes within the labour market and the product markets of European football magnified existing differences within European
football and worsened competitive balance. We also provide some empirical evidence on the concentration of player talent and on the concentration of sports successes towards teams from the Big 5 leagues. In the penultimate section, we discuss future options for European football and we conclude with some pathways for future research.

1. The Bosman Case: No Harmful Side Effects?

A general principle of EU law is that discrimination on grounds of nationality regarding EU citizens is illegal and that all citizens are allowed to work in other EU countries under the same conditions. The consequence of the Bosman Case was that all players at the end of their contract became agents that were free to move at an international labour market. This resulted consequently in the fact that clubs lost their monopsony power over players. On the contrary, market power went to those players who could sell their talents to the team that offered the highest wages. In combination with this power shift, European football faced the elimination of the limitation of the number of foreign players which resulted in a substantial migration of player talent. The Bosman Case made factor mobility of labour possible and resulted in a reallocation of player talent.4

The arguments of the football federations and UEFA to defend the existing transfer system were that transfer fees are a form of revenue sharing and remuneration of assets and that without these financial compensations clubs would eradicate youth development. Parrish and Mc Ardle5 notice that the European Court of Justice foresaw in its verdict alternative possibilities such as revenue sharing and salary cap to maintain or even increase competitive balance. The problem was that this kind of cross-subsidization would be difficult to implement in the structures of European football. This is because open league structures are historically embedded in European team sports. Moreover, UEFA and the national federations never took these alternatives into concern.

The academic world, however, countered arguments on the probability of concentration of player talent and decreasing competitive balance. Késenne,6 for example, indicated that North-American sports economists, such as Scully7 and


Quirk and Fort,\(^8\) analyzed the elimination in 1976 of the reserve clause in the US, a system comparable to the transfer system before Bosman, in the Major League Baseball (MLB). Their conclusion, based on existing theoretical and empirical studies, was that professional leagues in the US would benefit if limitations on freedom of players movement were eliminated.

The distribution of player talent in a market equilibrium is, according to Quirk and Fort,\(^9\) related to the market size of the clubs. Their central argument came from Rottenberg’s article\(^10\) that anticipated on the Coase theorem. In his famous 1960 article,\(^11\) Nobel Laureate Ronald Coase argued that with zero transaction costs, private and social costs will be equal. In other words, in a world without transaction costs, bargaining in an unrestricted market leads to optimal economic efficiency. Rottenberg argued that a limitation through a reserve clause would not prevent migration of talent towards major teams. In Coase’s terms the distribution of resources, in this case player talent, would not be affected by the distribution of ownership rights. Translation of these theoretical findings to professional sports means that free movement of players will have no effect on their distribution and was defined as the invariance principle.\(^12\)

This North American approach was used as an argument to demonstrate that the Bosman Case would have no impact on distribution of talent in Europe. Kése nne\(^13\) argued:

«Along with the North American sports economists, who can look back on an experience of more than twenty years with an open players market, I believe that the abolition of the transfer system in sports is a good thing. There is plenty of scientific evidence on the fact that there is no connection between limitations on players mobility and competitive balance in leagues».\(^14\)

The problem was that the European professional team sports environment did not fulfil the main criteria of Rottenberg namely

«Markets in which the freedom to buy and to sell is constrained by the reserve rule or by the suggested alternatives to it do not promise better results than do markets constructed on the postulate of freedom. It appears that free markets would give as good aggregate results as any other kind of market for industries, like the baseball industry, in which all firms must be


\(^13\) S. KÉSENNE, De Aangekondigde Dood Van het Belgische Voetbal, cit., 6.

\(^14\) Translation by the authors.
nearly equal if each is to prosper».\textsuperscript{15}

Even stronger: Szymanski\textsuperscript{16} recently declared after looking into a number of empirical studies that «this meta-data is hardly a ringing endorsement for the invariance principle, since “no effect” is reported in only seven out of twenty MLB studies that he investigated». This means that even in the MLB this theoretical framework can not been fully supported. Today, more than a decade after the introduction of the Bosman Case, we notice that the Rottenberg-Coase theorem did not hold for professional team sports in Europe. To underline this argument, we will show that from the start on the differences between the European football structure and the MLB indicated that the free agency principle would have substantial consequences for the distribution of players between leagues.

Throughout the last decade, the Rottemberg-Coase doctrine has been contested by sports economists such as Downward & Dawson,\textsuperscript{17} Bougheas & Downward\textsuperscript{18} and Moorhouse.\textsuperscript{19} Ericson\textsuperscript{20} argued that the source of inefficiency in a free-agency market of football players is created by free riding of large teams on the talent development in minor teams. This kind of free riding could however be mitigated by transfer fees for players at the end of their contract. A fundamental fact that the court did not consider, at least not explicitly, is that football players do not move around in a common market as long as there are independent leagues. This implies that smaller national leagues in particular cannot afford to keep their most talented players in a free-agency market. Consequently, the transfer fee can be motivated as an instrument to stimulate development of talent in small-market teams. Haan, Koning and Van Witteloostuijn\textsuperscript{21} warned that free movement of players could be the death penalty for many European leagues. According to them international differences will increase and international competition will become less exciting.\textsuperscript{22}

\begin{thebibliography}{9}
\bibitem{15} S. ROTTENBERG, The Baseball Player’s Labour Market, cit., 10.
\bibitem{20} T. ERICSON, The Bosman Case. Effects of the Abolition of the Transfer Fee, cit., 4.
\bibitem{21} M. HAAN, R. KONING, A. VAN WITTELLOOSTUIJN, Market Forces in European Soccer, Universiteit Groningen, SOM Research Reports n. 02F18, 2002.
\bibitem{22} Later on, formal models were developed to explain the divergence between leagues in a win maximizing environment: see S. KÉSENNE, The Peculiar International Economics of Professional Football in Europe, in Sc. J. of Pol. Ec., vol. 54, 2007, 388-399. Unfortunately, these arguments
\end{thebibliography}
2. Structural Differences and Developments

2.1 Structural differences between US and European league structures

There are some structural differences between US and European league structures. We present a short discussion of the main differences that have consequences on the relation between labour and product markets.

Firstly, there is no significant rival league abroad for the main American professional sports leagues such as the Major League Baseball (MLB), the National Football League (NFL) and in a lesser degree the National Basketball Association (NBA) and the National Hockey League (NHL). In European football, however, a player can migrate from one league to another. The result is an increasing competition between and within leagues on the labour market, while their product markets remain largely separated. This means that labour and product markets in Europe are different from their American counterparts. Teams are located in a country and have to play in their national competition. Since revenues in European football depend mainly and increasingly on media income, separated product markets result in a competitive disadvantage for teams located in smaller markets.

Secondly, US leagues are a closed profit maximizing league of teams granted a territorial monopoly with limitations on franchise numbers and eligibility of the size of a city to host a franchise. In Europe leagues are open and more win maximizing oriented. Promotion and relegation in a pyramidal hierarchical structure between leagues in a country on different levels is embedded in the European football tradition. This results in a blocking of cross-subsidization within and between national leagues because it would on the one hand increase the probability of relegation for major teams while on the other hand these major teams are in need of high budgets to qualify and have a competitive team for European competitions. There exists, however, some form of revenue sharing when it comes to broadcasting rights in national leagues and marketing revenues in the European Champions League. But even in the Champions League 50% of the total amount of money is divided according to the market size of the countries where clubs are located.

have not been developed before the Bosman Case was implemented.


24 Actually, there is an asymmetry in the degree by which product markets within professional football are separated. An increasing globalization of football, fostered by the UEFA Champions League, enables major teams from major leagues to attract fans from other countries as well. This causes a magnification effect in favor of these teams, resulting in a further decrease of competitive balance.
Cross-subsidization such as revenue sharing, salary cap and some other measures were introduced in the American system. Teams located in bigger markets share some of their revenues with teams from smaller markets to increase competitive balance in the league. They sometimes even pay a kind of luxury tax when their relative or nominal salary rate is too high. The uncertainty of outcome and competitive balance are central issues in US professional team sports. This kind of cross subsidization was the solution proposed by North American oriented sports economists. The European structure of professional football, however, is totally different because of the existence of relegation and supranational UEFA competitions for teams.

2.2 Changes in the labour market

The Bosman Case created a shift in market power at the labour market. Teams lost their monopsony position and many players became monopolists. The shift of bargaining power from clubs towards players resulted in an increasing competition to attract the best player talents. Win maximizing teams lost their power and ended up with financial problems because of an inter and intra league competition combined with policies aiming at short term success. The reason is that according to Dawson & Downward\textsuperscript{25} and Késenne\textsuperscript{26} teams in a win maximizing environment will overpay their players, with potential adverse implications that may explain some of the financial problems in European football. Football in Europe evolved from somewhat profit maximising national monopsony leagues towards a set of win-maximising leagues that operate in a unified open player talent market.\textsuperscript{27}

Because there was not any foreign competitive competition for major US leagues, the combination of profit maximizing clubs in a labour market with a fixed number of talents in a common product market results, according to Quirk and Fort,\textsuperscript{28} into a Walrasian equilibrium. In European football, the opening of the labour market made the number of talents variable. This caused an increasing competition between clubs to stay competitive within their league and, at the European level, between clubs of different leagues. In this setting, strategic interaction at the labour market occurs, so game theoretical considerations come into play.

2.3 Changes in the product market

In win maximizing European leagues all teams try to maximize their performance on the pitch. Under these conditions teams with higher budgets hire more and

better players to increase their probability to win. Increasing competitiveness within and between leagues results in a foot drain of player talent towards the main leagues.29

The main variable that gives long term assurance of sports successes is the total turnover of the club.30 Until the nineties the financial structure of professional football was what Andreff & Staudohar31 referred to as the traditional Spectator-Subsidies-Sponsors-Local or SSSL-model. The main sources of revenues of the clubs were ticketing, local subsidies and local sponsors. The changing structure and environment of European professional football forced major clubs and leagues to change their structures to a more encompassing Media-Corporations-Merchandising-Markets-Global model (MCMMG-model). The clubs and leagues became a broader economic product with broadcasting rights and sponsorship as the main sources of income.

In 1983 the BBC paid £2.6 million to cover the league on television. In 2005/06 the total turnover of the English Premier League stood at €1.974 billion with €839 million from broadcasting rights, €655 million from match day revenues and €500 million from sponsoring according to Deloitte.32 In a recent broadcasting deal for the period 2007-2010 Sky is paying £1.314 billion, Setanta £392 million, foreign broadcasting rights £625 million and internet and mobile telephone providers £400 million or £910.33 million a year. The total turnover of the Premier League in 2007/08 is estimated on €2.555 billion.33 Deloitte estimated the market size of European football in 2008 on €14.6 billion. The turnover of Big 5 European leagues tripled since 1995/96 and represent €7.7 billion or 53% of this amount. The newly signed media contract of €4.2 billion for the period 2007/08-2009/10 in the English Premier League indicates that the market power of this league will even probably increase. This results probably in a domination of the Premier League towards

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other leagues of the Big 5. Smaller but historical successful leagues such as Belgium, The Netherlands, Portugal and Scotland have a comparative disadvantage, because total turnover of these leagues amounts only to €1.17 billion.

The result was that clubs located in bigger product markets, and thus broadcasting markets, had a comparative advantage over clubs located in smaller product markets. Competition between European teams transformed from team level towards league level and resulted, as predicted theoretically by Haan, Koning and Van Witteloostuijn, in a gradually decreasing role for historical major teams such as Ajax Amsterdam, RSC Anderlecht or Celtic Glasgow, to mention some in European competitions. Competition between separated product markets in a win maximizing environment resulted after 1995 in an increasing domination of clubs from the big markets in Spain, Italy, England and in a lesser degree Germany and France.

In the latest years, divergence of broadcasting revenues increased between Big 5 leagues and other leagues because of a restructuring of the Champions League market pool. From 1991, when the Champions League was created, until 1999 UEFA divided 75% of their Champions League marketing revenues according to performances on the pitch. This implied that the remuneration for a victory, tie or loss was independent of the country of a team. In 1999 the Big 5 demanded (and obtained) another system of Champions League revenue sharing. From 1999 on the distribution system changed the share that went to the 32 teams participating at the Champions League. Since then, a share of 50% (of this 75%) is being distributed according to the value of each TV market represented by the participating teams. Needless to say that this modification favoured teams from bigger markets (the Big 5). Introducing this market pool was forced by the major leagues. UEFA was anxious that major teams would create an alternative European Football League (EFL) sponsored by media groups. As a result financial divergence between Big 5 and other leagues increased and the only minor form of revenue sharing was partly eliminated.

In sum, recent modifications in the product market have lead to a transformation of the competition structure between the Big 5 and the rest of the leagues towards a Stackelberg equilibrium in the labour market. Clubs from the Big 5 are market leaders that have the greatest market power and attract in a win maximizing environment the best player talents. On the long term this reinforces a concentration of player talents and results in increasing win percentages of teams.

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34 M. Haan, R. Koning, A. Van Witteloostuijn, Market Forces in European Soccer, cit., 21.
35 Media Partners wanted to create this league in 1998. Their idea was a closed revenue sharing league with 16 or 32 teams. Arsenal, Manchester United, Liverpool, Juventus, Inter Milan, AC Milan, Bayern München, Borussia Dortmund, Panathinaikos, Galatasaray, Benfica, Paris St Germain, Marseille, Ajax Amsterdam, Real Madrid and FC Barcelona would play in the closed highest division of EFL. The second division consisted out of teams that qualified themselves by performing well in their national competition. Rupert Murdoch, Leo Kirch, Silvio Berlusconi and Al Waleed Bin Talal were the potential investors and JP Morgan Bank, Slaughter & May and Media Partners would manage the competition.
from the Big 5 when they play against teams from other competitions. Leagues in smaller markets such as The Netherlands, Belgium, Scotland and Portugal moved gradually towards an inferior position in Europe. Their major teams could or can in some degree still compete on a level just below that of teams of the Big 5. These leagues transformed themselves into stepping stone leagues where player talents are educated and sold to teams of the major leagues. This still creates enough revenues to be able to outcompete many other leagues with similar market sizes, but is convicts them to a secondary position. A third specific category of leagues that arises in European football are so-called oligarchic leagues, indicating alternative financing by local oligarchs and regional politicians in some former Communist countries. More specifically, Ukraine and Russia are two countries that are most characterised by these practices.

3. **Empirical Evidence**

3.1 **An increased concentration of players talent**

We already mentioned that opening the labour market would increase the concentration of players talent which would result in a decreasing competitive balance between national leagues. To evaluate increasing concentration of players talent we compared the leagues of players participating at the US World Cup 1994 and the Germany World Cup 2006. World Cup 94 took place before the Bosman Case opened the labour market in EU professional football. Data on national teams at these World Cups are publicly available on the internet. To eliminate the potential influence by a change in the set of qualified countries at the World Cups of 1994 and 2006 we selected the 11 countries that were present at both World Cups. In 1994, 43% of all players of these selected squads played in Big 5 leagues, compared to 50% in 2006. The share of stepping stone leagues moved from 9.5% towards 9.1%. If we eliminate players performing in their own league, we also see an increase in the proportion of immigrant players that moved to Big 5 leagues from 18.2% in 1994 to 25.3% in 2006. For stepping stone leagues, this proportion hardly evolved, namely from 3.7% to 3.6%.

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37 Some examples are Yevgeni Giner (Sibnel) and Abramovich in CSKA Moscow, German Tkachenkov (former owner of metal companies) in Krylia Sovetov Samara, Leonid Fedun (Lukoil) in Spartak Moscow, Vladimir Alliochin (Torpedo Moscow), Zenith Sint Petersburg (owned by Gazprom), Ihor Surkis (Dynamo Kiev), Serhiy Taratu (FC Metalurh Donetsk), and Rinat Akhmetov (Shaktar Donetsk). See F. Foer, *How Soccer Explains the World, an Unlikely Theory of Globalization*, New York, Harper Collins Publisher, 2004; J. Wilson, *Behind the Curtain, Travels in Eastern European Football*, London, Orion Books, 2006.
39 Argentina, Brazil, Mexico, USA, Italy, Germany, Spain, Sweden, Switzerland, The Netherlands, Saudi-Arabia and South-Korea.
40 A two sample proportion comparisons test shows that the increase in the proportion of immigrant
Using other data, Poli & Ravenel\(^{41}\) analyzed the percentage of players that played at least once for their own national team. In 2007/08, the Big 5 average of this percentage was 45.0% with 66.2% for the Premier League (England). To name yet another figure, in 2007/08, the percentage of internationals in top 5 clubs of each league from the Big 5 was 64.6%. This increasing concentration of players talent would have to result in a decreasing competitive balance between national leagues in European football.

### 3.2 A decreased competitive balance between leagues

A method to find evidence on a decreasing competitive balance is to evaluate the evolution of the UEFA National Association Coefficient. This coefficient measures the performance of teams from an association in European Cups during the last five seasons. This coefficient is determined by the results of the clubs of the leagues in UEFA Champions League and Europe League games over the past five seasons. The UEFA National Association Coefficient is computed by adding up the results of the last 5 years. In those five years each team gets two points for a win and one point for a draw. The number of points awarded each season (two for each win by a club from that league, one for a draw) is divided by the number of teams that participated for that nation in that season. This number is then rounded to three decimal places. Points in qualification matches are halved: one point for a win and half a point for a draw. From 2005 on, one bonus point is allocated for reaching the quarter final, the semi final and the final of the UEFA cup. Reaching the group stage of the Champions League yields 3 bonus points. Also qualification for the first knock-out round of the Champions League yields 1 bonus points. The gini-coefficient of this variable increased from 23.3 in 1994/95 to 27.5 in 2008/09, which already indicates an increasing concentration of sports success and a decline of competitive balance.

#### 3.2.1 Specification

We apply a multiple regression analysis (OLS) on 1994/95 data and on 2008/09 data and compare the conditional mean of performance of the Big 5 leagues, controlling for market size. At the same time, it allows us to evaluate the position of some other special cases as well. As mentioned before, some leagues have specific characteristics with respect to broadcasting rights, one of the main revenue resources in professional football. In Big 5 leagues, these broadcasting rights are extremely important and give teams of these leagues a competitive advantage over other leagues in Europe, as discussed in previous sections. The problem is that these data are not available for all federations. Therefore, we use dummy

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variables. A first dummy, BIG5, identifies England, Spain, Italy, Germany and France. We expect not only a high and significant coefficient for this dummy, we also expect a significant increase of this coefficient between 1994/95 and 2008/09.

Another dummy variable, STEPPINGSTONE, indicates The Netherlands, Portugal, Belgium and Scotland, which we denoted in previous sections as stepping stone leagues. Major clubs of these countries belonged historically to the top in European competitions, but moved gradually towards a secondary position. We expect the coefficient of this dummy to be positive because of the historical strong performance of these countries. Therefore, these countries have relative high broadcasting rights both in 1994/95 and 2008/09 in comparison with other non Big 5 countries. Nevertheless, we do not expect an increase in this coefficient between 1994/95 and 2008/09.

OLIGARCH indicates Ukraine and Russia, the two countries that are affected the most by alternative financing of local oligarchs and regional politicians in some former Communist countries. We predict a non significant relation with the dependent variable in 1994/95 and a positive significant coefficient for this dummy variable in 2008/09.

While our focus is on the relative performance of these three groups, indicated by dummy variables, we want to control for market size as well. This may give a (weak) indication of the impact of the opening of the labour market on these leagues *ceteris paribus* the role of the market size they operate in. We capture market size by the natural log of gross domestic product per capita and by the natural log of population size, indicated by variables ln(GDP/CAPITA) and ln(POPULATION). While both variables are an indicator of potential revenues for teams, sponsors and media, population captures the pool for home grown talent as well. We expect that both variables will have a significant positive impact on the UEFA National Association Coefficient. This results in the following regression equation:

\[
\text{UEFA NATIONAL ASSOCIATION COEFFICIENT}_i = \beta_0 + \beta_1 \ln(\text{GDP/CAPITA}_i) + \beta_2 \ln(\text{POPULATION}_i) + \beta_3 \text{BIG5}_i + \beta_4 \text{STEPPINGSTONE}_i + \beta_5 \text{OLIGARCH}_i + \epsilon_i
\]

where \(i\) indexes each country. We compare its estimates for the 1994/95 season with those of the 2008/09 season.

### 3.2.2 Data

We make use of the UEFA National Association Coefficient of the 1994/95 season, the last season before the Bosman Case, and the most recent ranking from 2008/09. For the former season, these data were available for 47 federations, while for the latter season we have data on 53 federations. Montenegro, however, is a member of UEFA for less than five years, so we use 52 observations for the 2008/09 season. To make these data comparable we carried out some data
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We divided results of Yugoslavia (until 1992/93), USSR (1991/92) and CSSR (1992/93) into the results of their descendant countries if they were a member of UEFA in 1995. We looked into the clubs that were responsible for the UEFA National Association Coefficient and allocated these results to their new countries.

Population and GDP/capita data were taken from the IMF for the years 1994 and 2008. Data on GDP per capita are expressed in PPP International USD in constant prices (with 2000 as a base year). For the UK, we had to construct separate but comparable data for England, Scotland, Wales and Northern Ireland. These calculations were based on population and GDP data of the Office of National Statistics. To construct comparable GDP/capita for Malta, we had to complement IMF data with data from the World Development Indicators. Comparable data were not available, however, for very small countries like San Marino, Andorra, the Faroe Islands and Liechtenstein, so these countries were dropped from our sample.

Finally, our dataset consists of 45 observations for 1994/95 and 48 observations for 2008/09. In order not to grasp spurious effects we rescaled the 1994/95 UEFA National Association Coefficient such that its total is equal to that of the 2008/09 data. Table 1 summarizes descriptive statistics of the ratio scale variables in our dataset.

Table 1: Descriptive statistics

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Stdev</th>
<th>Q25</th>
<th>Q50</th>
<th>Q75</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>UEFA National Association Coefficient 94/95</td>
<td>20.7</td>
<td>19.8</td>
<td>5.7</td>
<td>16.0</td>
<td>28.7</td>
<td>992.9</td>
</tr>
<tr>
<td>UEFA National Association Coefficient 08/09</td>
<td>20.7</td>
<td>19.4</td>
<td>6.7</td>
<td>14.7</td>
<td>28.0</td>
<td>992.9</td>
</tr>
<tr>
<td>ln(GDP/CAPITA) 1994</td>
<td>9.3</td>
<td>0.9</td>
<td>8.7</td>
<td>9.6</td>
<td>10.0</td>
<td>426.6</td>
</tr>
<tr>
<td>ln(GDP/CAPITA) 2008</td>
<td>9.7</td>
<td>0.7</td>
<td>9.2</td>
<td>9.9</td>
<td>10.3</td>
<td>467.7</td>
</tr>
<tr>
<td>ln(POPULATION) 1994</td>
<td>8.8</td>
<td>1.4</td>
<td>8.2</td>
<td>8.7</td>
<td>9.6</td>
<td>407.1</td>
</tr>
<tr>
<td>ln(POPULATION) 2008</td>
<td>8.9</td>
<td>1.4</td>
<td>8.1</td>
<td>8.9</td>
<td>9.5</td>
<td>425.9</td>
</tr>
</tbody>
</table>

3.2.3 Results

Results are shown in table 2. We apply Huber-White-sandwich standard errors to correct for heteroskedasticity with a correction proposed by Davidson & MacKinnon for small samples. Collinearity diagnostics signal potential collinearity problems for both regressions, but this would only bias standard errors

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42 See www.ons.gov.uk.
43 The Breusch-Pagan test reports a test statistic of 13.08 for the 1994/95 regression and of 6.76 for the 2008/09 regression. So, we can reject the assumption of homoskedasticity (p < 0.01).
45 This method divides the square of the calculated residuals by (1 – h_{jj})^{2} while calculating the standard errors, where h_{jj} is the j^b diagonal element of the hat (projection) matrix.
against our hypothesis.\textsuperscript{46} Moreover, the correlation between ln(GDP/CAPITA) and ln(POPULATION), which are the only two ratio scale covariates in our model, only amounts to -0.0494 for 1994 and to -0.0559 for 2008.

\begin{table}[h]
\centering
\caption{Regression estimates}
\begin{tabular}{lcc}
\hline
\textbf{Dependent variable: UEFA National Association Coefficient} & 1994/95 & 2008/09 \\
\hline
\textbf{ln(GDP/CAPITA)} & 6.2569*** & 3.8029*** \\
 & (1.2510) & (1.1343) \\
\textbf{ln(POPULATION)} & 5.9518*** & 5.1591*** \\
 & (1.1100) & (1.2784) \\
\textbf{BIG 5} & 30.5515*** & 37.1631*** \\
 & (8.0095) & (7.6516) \\
\textbf{STEPPINGSTONE} & 15.7598*** & 13.9133*** \\
 & (6.1398) & (3.8931) \\
\textbf{OLIGARCH} & 1.6012 & 19.8647*** \\
 & (5.1894) & (5.0090) \\
\textbf{Constant} & -93.4507*** & -67.9988*** \\
 & (15.0812) & (13.7704) \\
\hline
\textbf{n} & 45 & 48 \\
\textbf{Prob. > F} & < 0.001 & < 0.001 \\
\textbf{Maximum VIF} & 1.98 & 1.96 \\
\textbf{Mean VIF} & 1.54 & 1.49 \\
\textbf{Condition Number (scaled variables)} & 36.71 & 44.72 \\
\textbf{R}^2 & 0.8649 & 0.8440 \\
\hline
\end{tabular}
\end{table}

The results in table 2 show an increasing positive coefficient for the BIG 5 and the OLIGARCH dummies.\textsuperscript{47} Controlling for market size, we see, as expected, that BIG 5 leagues have a disproportional high, and significantly increasing UEFA National Association Coefficient. Also STEPPINGSTONE leagues have a score that is significantly higher than the other leagues, both in 1994/95 and 2008/09. This can be explained by their strong historical position, combined with the fact that some of their clubs enjoy Champions League market pool revenues as well, albeit only marginally compared to clubs from BIG 5 leagues. We notice that this coefficient did not change significantly. As expected, the OLIGARCH dummy proved not to be significant in 1994/95, while its coefficient increased significantly in 2008/09. While the coefficients of ln(GDP/CAPITA) and ln(POPULATION) appear to be significant for both years, we notice a significant decrease of both coefficients.

\textsuperscript{46} See C. Baum, \textit{An Introduction to Modern Econometrics Using Stata}, Stata Press, College Station, 2006.

\textsuperscript{47} In order to test for the equality of regression coefficients, we applied a t-test, as proposed by R. Paternoster, R. Brame, P. Mazerolle, A. Puquero, \textit{Using the Correct Statistical Test for the Equality of Regression Coefficients}, in \textit{Crim.}, vol. 36, 1998, 859-866.
4. Future Options

In this paper, we provided theoretical explanations and empirical evidence on a divergence of sports success between national leagues in European football. The main reason for this divergence is the opening of the labour market with migrating players in a separated win maximizing product markets with almost no revenue sharing. Some sports economists see a solution in a further Americanisation of European football, resulting in a European Major League Football that resembles the European Football League format of 1998, with one of more semi closed divisions and forms of cross subsidization such as salary cap and revenue sharing. According to them this evolution is inevitable as this would reduce the gap between major and smaller leagues.\footnote{See S. KÉSENNE, \emph{Opgrensstending en marktregulering in professionele ploegsporten}, in \emph{Ec. en Soc. Tijd.}, vol. 52, 1998, 35-49; S. KÉSENNE, \emph{The Peculiar International Economics of Professional Football in Europe}, cit., 22; T. HOEHN, S. SZYMANSKI, \emph{European Football: the Structure of Leagues and Revenue Sharing}, in \emph{Ec. Pol.}, vol. 14, 1999, 204-240; S. SZYMANSKI, T. KUYPERS, \emph{Winners and losers, the business strategy of football}, cit., 30; R. NOLL, \emph{Competition Policy in Professional Sports after the Bosman Case}, in C. Jeanrenaud, S. Késenne (eds.), \emph{Competition Policy in Professional Sport: Europe after the Bosman Case}, Standaard Uitgeverij, Antwerp, 1999, 17-44; S. DOBSON, J. GODDARD, \emph{The Economics of Football}, cit., 30; C. DURAND, L. RAVENEL, E. BAYLE, \emph{The Strategic and Political Consequences of Using Demographic Criteria for the Organisation of European Leagues}, in \emph{European Journal of Sport Science}, vol. 5, 2005, 167-180; U. LAGO, R. SIMMONS, S. SZYMANSKI, \emph{The Financial Crisis in European Football}, in \emph{J. of Sp. Ec.}, vol. 7, 2006, 3-12.; A. BARONCELLI, U. LAGO, \emph{Italian Football}, in \emph{J. of Sp. Ec.}, vol. 7, 2006, 13-28.}

From an economic viewpoint creating an European Major League Football would be the natural outcome of the transformation of locally embedded football into a more business and media oriented entertainment.

This idea, however, stands in opposite of European football culture. Bale\footnote{J. BALE, \emph{Space, Place and Body Culture: Yi-Fu Tuan and a Geography of Sport}, in \emph{Geogr.-An.}, vol. 78B, n. 3, 1996, 163-171.} and Dejonghe\footnote{T. DEJONGHE, \emph{Sport in de Wereld: Ontstaan, Evolutie en Verspreiding}, Academia Press, Gent, 2001.} already mentioned the importance of strong relations with local communities, called topophilia, and the existence of historical traditions and rivalries in every country. Dobson and Goddard\footnote{S. DOBSON, J. GODDARD, \emph{The Economics of Football}, cit., 30.} also notice that those in favour of a total withdrawal of major teams from their domestic league underestimate the importance of domestic history and tradition as typical characteristics of football identity in Europe. Arnaud\footnote{J.L. ARNAUD, \emph{Independent European Sport Review}, EU, 2006.} refers also to the tradition of the football fan who wants a twin-pillar structure consistent of a national competition and an European competition. In sum, local embedment and identity are defining characteristics of European professional football.

Instead of an Americanisation we address some other solutions. We could merge product markets to some degree by creating some regional leagues or we could close the labour market to a certain degree. The first solution, merging product markets by the creation of regional leagues, has been proposed already...
product markets by the creation of regional leagues, has been proposed already by smaller leagues themselves. In 1998, some major teams\textsuperscript{53} from the stepping stone leagues tried to create an Atlantic League (later on Euro League, including teams from Norway, Denmark and Sweden as well). The aim of this regional league was to strengthen the financial position of their clubs through broadcasting rights while holding their traditional and historical position in a European context. They believed in a transnational league of big clubs from smaller leagues so that they could compete with teams from the Big 5. UEFA, however, rejected this proposal, and argued that the Bosman Case had no effect on competitive balance and that national leagues are a defining characteristic of the European sports structure. In this system, the number of leagues in Europe would decrease and the financial gap with the Big 5 would decrease. Another example of regionalisation of leagues is the idea of a Bene League, combining the best teams of Belgium and The Netherlands. This phantom appears occasionally in the media or in debates but has never been taken serious. A Bene League, however, would take concerns of local embedment and identity better into account than the geographically and culturally hybrid concept of an Euro League.

The second solution, closing the labour market to some degree, means a limitation on the number of foreign players in national leagues. In the last years some new attempts to restrict players mobility, such as compensation systems of youth players and 6 + 5 or home grown rules, were launched. Fédération Internationale de Football Association (hereafter FIFA) advocates the 6 + 5 rule, which basically states that a team must start with at least six players that should be eligible for the national team of the country in which the club is located. FIFA Chairman Sepp Blatter recently argued that hiring an increasing number of foreign players results in a loss of the local, regional en even national identity of clubs.\textsuperscript{54} Young players lose, according to Blatter, their motivation to practice and rich clubs brought a two-tier competition in many countries with only a few teams with a lot of foreign talents playing for the title. Blatter wanted to convince the EU to refer to the specificity of sports in the new European Treaty. With this rule FIFA opposed the UEFA home grown rule, which sets a quota of locally-trained players without discrimination on grounds of nationality. Blatter’s proposal, however, is unworkable in the EU because it contravenes EU laws on the free movement of labour and creates a direct discrimination based on nationality. The European Parliament voted against the 6 + 5 rule in a resolution adopted on May 8\textsuperscript{th} 2008.

The home grown rule on the other hand, where clubs are obliged to have a certain number of players between the age of 15 and 21 years who have been trained locally during at least three years, does not imply discrimination based on nationality. It only protects locally trained players and was supported by European

\textsuperscript{53} Ajax, Feyenoord and PSV (The Netherlands), RSC Anderlecht (Belgium), Celtic and Glasgow Rangers (Scotland) and FC Porto and Benfica (Portugal).

\textsuperscript{54} Yes in principle to 6+5 rule, see www.fifa.com/aboutfifa/federation/bodies/media/newsid=684707.html (May 2008).
Parliament. This rule would ensure investments in grass roots youth development. Some sports economists, however, declare that introducing these labour market limitations would result in a return to the Pre Bosman era. As could be expected, some English clubs from the Premier League protested against this rule as well. FC Liverpool manager Rafael Benitez criticised this rule and argued that you need the best players you have on the pitch when you are competing in the Champions League.\textsuperscript{55} This free market argument is typical for dominant players in such an economic environment.

\textit{Conclusions}

The Bosman Case created an open labour market in a win maximization environment with separated product markets. This new reality for European football was totally different than the American open labour market in profit maximizing leagues and common product markets. At first, many sports economists adhered to the American approach towards professional team sports and argued that opening the labour market would have no effect on the distribution of talent. Despite early warnings by other scholars in sports economics, European football can not been compared with American leagues. They predicted a concentration of talent when teams have to compete first in their own league to qualify for European competitions. Besides the intra league competition, inter league competition became also important.

The strong relation between turnover and sports success made that major product markets gradually monopolized revenues so that they could attract better talents. Therefore, inter league competition is linked with the market size of national competitions. As a result Big 5 leagues evolved towards a near monopolisation of European success. To express it in game theoretical terms, Big 5 leagues moved to a leader position in a Stackelberg equilibrium. Stepping stone leagues and the other leagues were moved into a followers position and noticed decreasing sports successes.

While a direct econometric test of the impact of the Bosman Case on these evolutions is left for further research, empirical evidence is available to demonstrate the relevance of the issues at hand. Empirical data of World Cup 1994 and World Cup 2006 showed us that since the Bosman Case an increased concentration of talent in Big 5 leagues occurred. Next, using OLS regression, we confirm that performances in UEFA competitions such as the Champions League and UEFA demonstrate a decline in competitive balance between leagues. In other words the opening of the labour market in separated product markets had a divergent effect on professional football in Europe. Next to this, we see an increase in the sports successes of (recently) oligarchic funded leagues such as Russia and Ukraine.

Sports economists have been defining both Walrasian and Nash equilibria for several labour/product market combinations. We plead, however, to enrich these neoclassical textbook applications with non tangible issues such as local embedment and identity. The European White Paper on Sport\textsuperscript{56} recognized the specificity of sports and argued that a common product market is not institutionalized in the European way of looking at professional football. The problems with an open labour market, which creates a concentration of player talent into some leagues and teams stimulated the EU to recognize sports as something specific. As a result, European professional football shall probably face increasing limitations on the openness of the labour market in the years to come.

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