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# The Impact of the Bosman Ruling on the Market for Native Soccer Players

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## Abstract

This paper examines whether the Bosman ruling plays an important role in the market for native soccer players. Through the abolition of transfer fees after the expiration of contracts, as well as the liberalization of the migration of professional soccer players within the European Union, the Bosman ruling could negatively impact the number of national players participating in their national leagues. To explore this issue, we use data on the First Division of the Spanish League for the seasons 1980/1981 to 2011/2012. Results point to a decline in the number of native Spanish players after the Bosman ruling, although the impact does not appear to be permanent. This finding is consistent with the use of different subsamples, and to the introduction of controls for unobserved characteristics varying at the team level or over time, and to observed characteristics such as GDP per capita, population, the age of players, and potential TV revenues. This work also explores the impact of other, similar legislative changes, such as the Kolpak case and the Cotonou agreement, which appeared in the post-Bosman period. In addition, we incorporate empirical evidence of the potential impact that the Bosman ruling may have on the performance of the Spanish players. Our findings indicate that the Bosman case has had a negative impact on the number of minutes played and on the participation of national players in the first team, suggesting that an average Spanish player is less important to his team.

**Keywords:** Bosman ruling, Spanish League, National Labor Market, Kolpak-Nihat-Simutenkov cases, Cotonou agreement, TV rights.

**JEL classification:** F22, J22, K19, L83

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## 1- Introduction

Although the analysis of the relationship between economics and sports has grown considerably in recent decades (Andreff and Szymanski 2006), labor market research remains an important area in this field because of the opportunity that professional sport offers for the analysis of labor market changes (Kahn 2000), especially in recent years with the increase of athlete migrations across countries. As Andreff (2006) explains, the international migration of sportsmen and sportswomen increased substantially during the 1990s with the liberalization of the labor market for professional athletes in the major European leagues, and the increasing South-North movement of athletes. This pattern is clearly observed in professional soccer, one of the most popular and globalized sports (Karaca 2008 and Milanovic 2005). As of the 2014 season, the percentage of foreign players is around 59.3% in the English Premier League, 54.8% in the Italian Calcio, 43.5% in the German Bundesliga, 38.9% in the Spanish Liga, and 31.6% in the French Ligue 1 (CIES Football Observatory 2014). Several studies have analyzed the implications of the rise in the number of foreigners in the professional soccer leagues, mainly exploring the relationship between the number of foreigners in domestic leagues and the performance of the national team (Álvarez et al. 2011 and Berlinschi et al. 2013). Less work has been done on the study of the determinants of the decline in the number of native players in these leagues. In this paper, we examine whether the Bosman ruling has played a role in the decrease of the percentage of native players.

The ruling of the European Court of Justice, in December 1995, involved the liberalization of the migration of professional sportsmen and sportswomen within the EU, and the abolition of transfer fees after the expiration of contracts (see Court of Justice of the European Communities, Case C-415/93).<sup>1</sup> The ECJ considered that sporting activities did not constitute an exception to the provisions of the Treaty of Rome, in contrast to the opinion of the European Football Federation, UEFA, that held that soccer was not an economic activity and therefore not subject to the Treaty regarding freedom of movement (see Antonioni and Cubbin (2000) for a review of the Bosman ruling). After this ruling, clubs lost their power over players and talented soccer players had the market power to choose to play for the team that offered the highest

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<sup>1</sup> Prior to the Bosman ruling, the European soccer clubs, were restricted by the 3+2 rule that allowed only three foreign soccer players in each team, plus two other foreigners provided they had lived in the host country for five years.

salary. Then, there is a transfer of property rights from the clubs to the soccer players. Additionally, the elimination of quotas in the number of foreign players for EU-national teams could result in a significant migration of soccer players, and thus a reallocation of soccer players. Even the UEFA Chief Executive, Lars-Christer Olsson, in 2005, ten years after the Bosman ruling, said the decision ruined soccer's values and has led to the abandonment of home-grown talent (The Telegraph, 13 December 2005).

According to the Coase Theorem, without transaction costs, this reallocation of ownership rights should have no effect, as in the case of the elimination of the "reserve clause" in the US (Quirk and Fort 1992). However, the economic literature on this issue indicates that the Coasian approach does not hold for professional team sports in Europe, suggesting that the source of inefficiency is generated by the free-riding of big clubs on the talent development of the small clubs (Ericson 2000). We add to this research by examining the applicability of the Coase Theorem to the impact of the Bosman ruling on the market for native soccer players. Of course, it is not the first time the consequences of the Bosman case in sports economics have been explored. Certain papers have focused on analyzing the impact of this case on player migration in professional soccer (Frick 2009), as well as the impact on the quality of the soccer leagues (Ericson 2000, Flores et al. 2010), on the decreasing competitive balance (Kessenne 2007, Vrooman 2007), on player salary levels (Kessenne 2007) and, more recently, analyzing the effect on national teams (Binder and Findlay 2012). Here, we examine the Spanish case, considering the evolution of domestic players in the Spanish League.

The Spanish Soccer League First Division is considered one of the Big 5 leagues in the world (CIES Football Observatory 2014). Many of the most talented players in the world want to play in Spain since several of these teams are considered by UEFA to be the best clubs in Europe, primarily due to their historically high success rate in European competitions (Barros et al. 2008, and UEFA Classification of Clubs). Thus, the liberalization of the soccer player market in Europe following the Bosman ruling could generate an increase in the signings of international players by Spanish clubs which may displace the participation of Spanish players in their own league. In order to explore this issue, we use data from the *bdfutbol* webpage and the Spanish Professional Soccer League.<sup>2</sup> The sample considered covers the period from the 1980/81 season to

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<sup>2</sup> This dataset was collected by the author of this work and his/her assistants from the webpage <http://www.bdfutbol.com/> and from the Spanish Professional Soccer League.

the 2011/12 season. Our results suggest that the impact of the Bosman ruling on the percentage of Spanish players was not permanent; after 9-10 years, no effect can be discerned when controlling for unobserved characteristics that vary at the team level, and over time.

In this work, we have made additional efforts to check whether our findings are robust and consistent by repeating the analysis using different subsamples, for example, by excluding the two most important clubs in the Spanish League (and in Europe, following UEFA's classification), Real Madrid and FC Barcelona. Our results do not vary. The effect of the Bosman case also remains unchanged if more controls are added to the analysis, such as per-capita GDP measured at the regional level, and other variables related to potential TV revenues. These variables can be correlated with the outcome of interest, and for this reason, if omitted, our estimates could be biased. Other legislative changes in the post-Bosman period have also been taken into account, to test whether our estimates capture the effect of the Bosman ruling in addition to - or instead of - the effect of other cases. For example, the Kolpak-Nihat-Simutenkov cases extended the Bosman ruling to non-EU nationals (Penn 2006), those linked to the EU by either a European association agreement (such as EU candidate countries) and/or a trade and cooperation agreement, and the Cotonou agreement, signed in 2000 by the EU and several African, Caribbean and Pacific countries. It is comforting that, even after adding all these possible determinants of the evolution of Spanish professional soccer players, results on the impact of the Bosman ruling are the same, pointing to a transitory effect on Spanish national players.

Not only do we study the role of the Bosman ruling in the participation of Spanish soccer players in their own league, but we also explore the behavior of these Spanish players. As suggested by Álvarez et al. (2011), importing foreign talent may improve the behavior of the national teams, which should be consistent with the spillover hypothesis. In our case, we consider the performance of all national players, not only those participating in the national teams. Results suggest that, after the Bosman ruling, the participation of the national players in the first team in each match, and the number of minutes played by the Spanish players, decreases, which is not surprising since the number of Spanish players decreased. Regarding goals scored, we observe no significant coefficients during the early post-Bosman period, which may point to no differences in the competitiveness of Spanish and foreign players, but this effect changes in the medium and long term, coinciding with the period in which the effect of

the Bosman ruling on the percentage of Spanish players is not statistically significant. All this suggests that, although in the long-term the percentage of Spanish players is not affected by the Bosman ruling, the average national players have lost some degree of importance in the first team as a direct result of that ruling, and are mainly used as the reserves.

The paper is organized as follows. Section 2 introduces the empirical strategy. Section 3 describes the data. In Section 4, we show our main results, and Section 5 presents our conclusions.

## 2- Empirical Strategy

To identify the impact of the Bosman ruling on the participation of Spanish players in the Spanish League First Division, we first consider a static approach in which the impact is considered as a break in the series, formally:

$$PlayerSpa_{e,t} = \beta Bosman_{e,t} + \Sigma e TeamFE_e + \Sigma Team_e * Time_t + \Sigma Team_e * Time_t^2 + u_{e,t} \quad (1)$$

where the dependent variable,  $PlayerSpa_{e,t}$ , represents the percentage of Spanish players over the total team players of club  $e$  in year  $t$ . The explanatory variable  $Bosman_{e,t}$  is a dummy variable that takes value "1" when team  $e$  is affected by the Bosman ruling in year  $t$ , and takes value "0" otherwise. The parameter  $\beta$  is interpreted as the mean change in the percentage of Spanish players that can be due to the Bosman case. From a theoretical point of view, we would expect that the elimination of transfer fees after the expiration of contracts and the liberalization of migration of EU soccer players, decrease the costs of signing-up international players, which should have a negative impact on the participation of Spanish players. Nevertheless, this open access to EU national soccer players can lead to greater demands for high salaries by talented players, which can increase the cost of the signings, and thus it may have a positive impact on the number of Spanish players. Then, the sign of  $\beta$  is not theoretically clear. Equation 1 also includes team fixed effects to control for unobservable characteristics, such as club differences, and linear and quadratic team-specific time trends that allow us to capture unobservable characteristics that vary over time, and whose omission could lead to bias in the estimates.

If the effects of the Bosman case vary over time, this methodology would not be appropriate to capture the effect of that ruling. To solve this issue, we propose the use of a dynamic model à la Wolfers (Wolfers 2006), formally:

$$PlayerSp_{e,t} = \sum_k \beta_k Bosman_{e,t,k} + \sum_e TeamFE_e + \sum_e Team_e * Time_t + \sum_e Team_e * Time_t^2 + u_{e,t} \quad (2)$$

with  $Bosman_{e,t}$  being a dummy that takes value "1" when team  $e$  has been affected by the Bosman ruling in year  $t$  for  $k$  periods, and "0" otherwise. These variables capture the dynamic response of the percentage of players of Spanish nationality to the Bosman ruling. The above controls are maintained, allowing us to capture pre-existing trends. The negative sign of these  $\beta$  parameters indicates that the percentage of Spanish players has decreased after  $k$  periods since the Bosman case. The interpretation of a positive sign is the opposite.

### 3- Data

We use data from the First Division of the Spanish Professional League for the seasons 1980/81 to 2011/12, collected from the *bdfutbol* webpage and from the website of the Spanish Professional Soccer League. The database was compiled by the author of this analysis and his/her assistants. Our sample consists of individuals whose first reported nationality is Spanish, and who have participated in at least two matches (in the first team or as a reserve) in the First Division of the Spanish League. We choose this sample to avoid the incorporation of soccer players who have participated in the matches for unexpected reasons, unrelated to the Bosman case, such as injuries to other players, strikes of soccer players, and so on. In those situations, players from junior teams substitute for the professional players and their inclusion in our sample could lead to biased results, by increasing the number of Spanish players.

Figure 1 shows the evolution of the percentage of Spanish players in the Spanish league, our variable of interest. We observe that in the pre-Bosman period, the percentage of Spanish players slightly increases from 88% in the 1980/81 season to 90% in the 1985/86 season. From that period on, the participation of Spanish players decreases, with that being around 79% in the season 1995/96. After the Bosman ruling,

the percentage of Spanish players sharply declines to 60% in the 1997/98 season, but then recovers its previous importance with the rate being almost 75% in the 2002/03 season, and even higher in the 2004/05 season, to around 76%. Then, the percentage of Spanish players in the Spanish league smoothly declines to around 65% in the last seasons considered. If it is, in fact, the Bosman ruling that is operating here, we should observe an increase in the presence of EU national soccer players. For example, as can be seen in Figure 2, in some cases, EU nationals increase their participation in the Spanish league after the Bosman ruling; the percentage of French and Portuguese players, for example, rises dramatically. We also observe an increase in the number of soccer players from the Netherlands and Italy. Less clear is the impact of the Bosman ruling in the case of players from Germany, the United Kingdom, and Denmark.

This quick glance at the evolution of the participation of Spanish players in Professional soccer appears to reveal a negative impact of the Bosman ruling, at least in the short term. However, some years after that ruling, the evolution of the percentage of Spaniard players follows a similar trend to that detected in the pre-Bosman period, suggesting that pre-existing trends could be driving the evolution of Spanish players in the post-Bosman period (see Figure 1). A more rigorous analysis is needed to examine this issue, as presented in the following section. We first choose only a sample that includes those teams that have participated in the Spanish league for at least 5 seasons in the pre- and post-Bosman periods, to mitigate the negative impact of the participation in the Second Division of the Spanish League may have on the revenues of the clubs, that negatively impacts the capacity to sign-up international, talented players. Our sample incorporates 462 observations from 18 different teams for the period 1980/81 to 2011/12.<sup>3</sup> Note that the results are maintained, as we discuss below, when we change this sample, for example, to include all teams in the analysis.

## **4- Results**

### **4.1 Main Results and Robustness Checks**

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<sup>3</sup> The clubs considered are: Athletic Club de Bilbao (32 seasons), Atlético de Madrid (30 seasons), FC Barcelona (32 seasons), Real Betis Balompié (25 seasons), Celta de Vigo (19 seasons), Club Deportivo Espanyol (30 seasons), Real Club Deportivo Mallorca (21 seasons), Atlético Osasuna (26 seasons), Real Racing de Santander (23 seasons), Real Madrid CF (32 seasons), Real Oviedo (13 seasons), Real Sociedad (29 seasons), Real Zaragoza (30 seasons), Sevilla FC (29 seasons), Real Sporting de Gijón (22 seasons), Club Deportivo Tenerife (12 seasons), Valencia CF (31 seasons), and Real Valladolid CF (26 seasons).

Table 1 shows the estimates for Equation (1). In the first column, the Bosman case is associated with a decline in the percentage of Spanish players in the Spanish league. This is maintained even after adding team-specific linear and quadratic time trends in Columns (2) and (3), although the estimated coefficient of the effect of the Bosman ruling increases (decreases in absolute value) by almost 50%, after adding those controls to the specifications. This is presumably because, in these specifications, we are not only eliminating team fixed characteristics but also time-varying unobservable factors that could bias the estimates reported in Column (1).

Since the analysis presented in the previous section points to a potential dynamic response of the Spanish players to the Bosman ruling, we use an alternative dynamic strategy to capture the effect of that ruling. Table 2 presents the estimate coefficients for Equation (2) in Columns (4), (5) and (6). In all three specifications, the estimated coefficients show a negative impact of the Bosman case on the presence of Spanish players in the Spanish league, at least in the short term. However, after the introduction of the team-specific linear and quadratic time trends that allow us to capture for unobservable characteristics that vary across time, the effect fades over subsequent years. As can be seen in Column (6), coefficients on the dynamic response turn out not to be statistically significant after 9-10 years. Then, our results suggest that the Bosman ruling contributed to a decrease in the participation of Spanish soccer players in the Spanish league, but that the impact was transitory.

To test this further, we provide additional empirical evidence to show that these results are not driven by omitted socio-economic variables. We add to the analysis controls for per-capita GDP, since the capacity of Spanish teams to sign up international soccer players can increase in economic expansions, and decrease during contractions. Results on the impact of the Bosman ruling do not vary after the introduction of per-capita GDP (see Table 2). Column (1) shows the estimates presented in Column (6) of Table 1 to clarify the comparison. Note that the sign of the effect of per-capita GDP is negative in the first specification, Column (2), but that this changes after the introduction of team-specific time trends, Columns (3) and (4), although the effect of this variable is not statistically significant when quadratic trends are added. This may indicate that results without time trends can be biased since, in those specifications, we are not removing unobservable characteristics that vary over time. In all these specifications, we also incorporate controls for team characteristics. We add controls for the number of previous King's Cups that the teams have won, and for the number of

previous Spanish League Championships. We would expect that the greater the number of Cups or League Championships, the more likely it is that the team can sign the best players, regardless of their nationality. The average age of the team is introduced as a control, since international players usually sign up when young, and they normally end their careers in their country of origin, or in less competitive leagues; thus, the older a team's average age is, the less likely is that club to sign non-national players. As explained above, after adding all these controls, results on the effect of the Bosman case are unchanged.

During the period analyzed, television (TV) revenues dramatically increased (García and Rodríguez 2006). Since a rise in revenues could increase the capacity of the clubs to have more international players, it could be argued that we are capturing changes in TV revenues in addition to, or instead of, the Bosman case. To tackle this issue, although we do not have information on the TV revenues that the teams received from private companies, we use as a proxy of possible TV revenues, the regional TV stations. From the late 1980s, all but four Spanish regions created public regional TV channels (see Table 3). It is worth noting that soccer was one of the main programs for those stations, with larger audiences, and the broadcast of a soccer match was often the first program (this information is available in most of the regional TV webpages). In those cases where these channels do not have the television rights for their regional teams, they broadcast friendly matches or give financial support to their regional clubs by way of advertisements. Controls for regional TV are incorporated in this analysis in Table 4. As previously, Column (1) replicates the estimates presented in Column (6) of Table 1, to facilitate the comparison. Column (2) shows the results after introducing a dummy for picking up the impact of regional TV, and in Column (3), we add dynamic controls for the TV impact. With respect to the findings on the Bosman ruling, it can be seen that there are no significant changes. The magnitude of the coefficients varies somewhat, but the effect is still transitory, suggesting that after a decade no effect can be discerned when team-specific linear and quadratic time trends are added.

From the mid and late-1990s, Spanish teams signed individual contracts with one of two companies, Sogecable and Audiovisual Sport (García and Rodríguez, 2006). This generated important variations in the TV revenues that those clubs received, and it could be argued that these differences are driving our results. To probe this further, we have repeated the entire analysis after excluding the two main teams in the league, Real Madrid and FC Barcelona, both, according to UEFA Classification, being the winners

of the majority of competitions and having larger budgets (see Columns (1)-(3) of Table 5). Once these teams are dropped from the sample, the impact of the Bosman ruling dissipates after 5-6 years, when pre-existing trends are controlled for (Column 3). This, again, points to a non-permanent effect of the Bosman case. Similarly, we have repeated the analysis including all teams that participated in the First Division of the Spanish League (see Columns (4) to (6) in Table 5).<sup>4</sup> As in previous estimates, results indicate that the effect of the Bosman ruling on the participation of Spanish soccer players in the Spanish League disappear after 5-6 years, after including all controls. All in all, our findings suggest that factors other than the Bosman case are driving the evolution of the participation of Spanish soccer players in their own First Division League.

#### **4.2. Is it the Bosman case and/or the Kolpak-Nihat-Simutenkov cases and/or the Cotonou Agreement?**

Another important event that occurred in the period considered is that the principles applied in the Bosman case were extended to consider other non-EU nationals originating from “third countries” equal to European Union players (Hendrickx 2005). There are several examples of sportsmen attempting to attain that objective; for example, the Kolpak case. Kolpak was a Slovak handball player in the German handball league.<sup>5</sup> In 2000, Slovakia was not a member of the European Union, and therefore the Bosman ruling did not apply to their citizens. However, Slovakia had an Association Agreement with the European Union. Based on that agreement, in 2003 the European Court of Justice ruled in favor of Kolpak, giving equal rights for Slovak sportsmen residing and lawfully employed by a club established in a Member State, and Community players. Similarly, Simutenkov and Nihat, Russian and Turkish soccer players, respectively, participating in the Spanish League, obtained rights equal to Community soccer players in 2005 and 2008, respectively (Hendrickx 2005, Penn 2006).<sup>6</sup> In this framework, one can hypothesize that in the mid- and long-term, the estimates presented on the effect of the Bosman ruling are also capturing all these cases. Nevertheless, by simply plotting the evolution of soccer players originating from some of those “third countries” in the Spanish League, see Figure 3, it can be seen that

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<sup>4</sup> In this case, we have 630 observations. All 46 of these clubs are included in Table 3.

<sup>5</sup> Case C-438/00, Deutscher Handballbund eV vs. Maros Kolpak

<sup>6</sup> Case C-265/03, Igor Simutenkov v. Ministerio de Educación y Cultura, Real Federación Española de Fútbol.

Spanish clubs do not react in the same way after the Bosman case. From the late 1980s until the mid-1990s, the numbers of soccer players originating from countries such as Bosnia-Herzegovina, Croatia, Romania, Russia, and Serbia gradually increase. Then, there is a decline in the participation of these players in the Spanish League, with their representation being lower than 1% by the late 2000s. The evolution of the Turkish players is a little different. Their participation rate was almost 0% until the late 1990s, but it has increased a little since then. To check for this bias in our main findings, we repeat our analysis by adding a dummy variable that takes value “1” since 2003, the year of the Kolpak ruling, and “0” otherwise. Considering the impact of the Bosman case, we still observe a transitory effect (see Column (2) of Table 6).<sup>7</sup>

The non-discrimination principles applied to all these non-EU players were also taken into consideration for players from the countries that signed the Cotonou Agreement (2007) in the Spanish League.<sup>8</sup> In that year, Mahamadou Diarrá from Mali, and Ikecukwu Uche from Nigeria, players for Real Madrid and Getafe, respectively, asked to be considered as equal to the EU players in the Spanish Soccer Association, because of the Cotonou agreement. These two players were successful in obtaining equal rights. As before, one can surmise that this had an impact on the participation of Spanish players in the Spanish League, since more individuals were then considered equal to EU players. To explore this issue, we have also plotted the evolution of players whose countries of origin signed the Cotonou Agreement (see Figure 4).<sup>9</sup> Note that, in the Spanish League, soccer players originating from those countries represent, in almost the whole period, less than 0.5%.<sup>10</sup> There is a peak around the 1996/97 season in the case of players from Nigeria, which is not surprising, since the Bosman ruling gives an opportunity to other foreigners, since EU players are no longer classified as foreign. From the late 2000s, once again the number of soccer players from Nigeria, as well as those from Ivory Coast, increases. For the rest of the cases, we observe some peaks but the pattern is not clear. In order to test whether our estimates are driven by the application of the Cotonou Agreement, as in the Kolpak case, we add a dummy variable

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<sup>7</sup> Column (1) adds Column (6) of Table 1 for easier comparison of results.

<sup>8</sup> It is a partnership agreement between developing countries and the EU. Since 2000, it was the framework for the relationships between the EU and 79 countries from Africa, the Caribbean, and the Pacific (ACP). It also contains a non-discrimination clause with regard to nationality (Hendrickx 2005).

<sup>9</sup> We plot only 6 countries of origin (Cameroon, Ivory Coast, Equatorial Guinea, The Congo, Ghana, and Nigeria).

<sup>10</sup> In other important leagues such as the Portuguese and the French, the number of soccer player from Africa is considerable greater, mainly due to migration from former colonial possessions, (Darby 2007 and Darby et al. 2007).

that takes value “1” since 2007, and “0” otherwise. Though the magnitude of the effect changes a little, our results, again, indicate that the Bosman case had a non-permanent effect on the evolution of Spanish players in the Spanish League (Column (3) of Table 6).

### **4.3 The impact of the Bosman case on the behavior of Spanish players**

So far, we have empirically studied the Bosman case impact on the participation of Spanish players in their own domestic league. We now examine the potential effect of the Bosman case on the behavior of Spanish players. To address this issue, we would have liked to have information on what motivated soccer players performance, but this information is not available. Instead, we explore the evolution of some measures of performance. Following Álvarez et al. (2011), we would expect that the skills of local soccer players would benefit from contact with a greater number of international players signing up as a result of the Bosman case. Then, we would expect that the Bosman case would have a positive impact on the performance of Spanish players. However, if clubs sign international soccer players with high salaries, it would be expected that those players would be part of the first team, rather than the average Spanish players with lesser abilities. Hence, Spaniards would play fewer minutes in the matches, and thus would be less likely to score goals.

In Table 7, Column (1) adds Column (6) of Table 1 to clarify the comparison with previous findings. In Column (2), the dependent variable is defined as the proportion of matches in which an average Spanish player has been in the first team in a specific year. The dependent variable in Column (3), is calculated as the average minutes per match in which an average Spanish player has played in a specific year, per club. In Column (4), we incorporate as dependent variable the average goals per match scored by an average Spanish player in a specific year, per club. In the last Column, the dependent variable measures the average yellow cards per match received by an average Spanish player in a specific year, per club. The estimated coefficients suggest a negative impact of the Bosman case on the contribution of Spanish players in the first team, although no effect is detected 15 years after the Bosman ruling. Similarly, results also indicate that the ruling is negatively associated with the minutes played by Spanish players, although, as before, this relationship disappears in the long term. In terms of goals scored, we observe that during the early years of the Bosman effect, no

statistically significant coefficients are obtained, but this changed in the medium and long term, coinciding with the period in which the effect of the Bosman ruling on the percentage of Spanish players is not statistically significant. No relationship has been found between the Bosman case and the number of yellow cards received by Spaniards. All in all, our findings suggest that, although the Bosman ruling liberalized the soccer player market, that ruling is not the main factor driving the decline in the percentage of Spanish players in Spanish clubs, since its effect was transitory. However, since that ruling, an average Spanish player participates less in the first team, plays fewer minutes, and scores fewer goals, all of which points to a less important role of that player in the team.

## **5- Conclusions**

This paper examines the impact of the Bosman ruling on the participation of local soccer players in their own league. Since that case implied a reduction in the costs of signing international players, via liberalization of the migration of professional players within the EU, and through the elimination of transfer fees after the expiration of contracts, we would expect the implementation of the ruling to affect the participation of domestic players in their own leagues. To run this analysis, we use Spanish data from the 1980/81 season to the 2011/12 season.

Our results suggest that the Bosman ruling had a negative but transitory effect on the percentage of Spanish players participating in their own major League, after controlling for pre-existing trends. Our results are consistent, even after adding controls for socio-economic variables and characteristics at the team level. The response of the Spanish players to the Bosman ruling is also quite robust to the use of different subsamples, as well as to the inclusion of other rulings that extend the Bosman case to other non-EU nationals, such as the Kolpak case and the Cotonou Agreement.

We further examine the impact of that ruling on the performance of Spanish players by analyzing its effect on the participation of Spanish players in the first team, on the minutes that those individuals play, on the goals scored, and on the yellow cards received. We find that both participation in the first team and the minutes played decrease, pointing to a greater reserve role of Spanish players, although the effect disappears over time. The impact appears to be negative and permanent in the case of

the goals scored, suggesting a less important role for an average Spanish player after the Bosman ruling.

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Table 1: The impact of the Bosman Case on Spanish Soccer Players

	(1)	(2)	(3)	(4)	(5)	(6)
Bosman	-17.622*** (0.836)	-8.981*** (1.300)	-8.320*** (1.236)			
Bosman 1-2				-11.512*** (1.439)	-5.066*** (1.502)	-4.958*** (1.561)
Bosman 3-4				-22.501*** (1.627)	-14.277*** (1.698)	-13.716*** (1.692)
Bosman 5-6				-20.921*** (1.765)	-10.514*** (1.799)	-10.016*** (1.768)
Bosman 7-8				-16.972*** (1.925)	-5.461*** (1.897)	-4.309** (1.753)
Bosman 9-10				-13.948*** (1.640)	-0.620 (2.021)	0.996 (1.997)
Bosman 11-12				-15.011*** (1.662)	0.628 (1.988)	2.893 (2.093)
Bosman 13-14				-19.829*** (2.615)	-5.030** (2.325)	-1.420 (2.385)
Bosman >15				-19.904*** (1.918)	-3.198* (1.839)	1.537 (1.955)
Team FE	Yes	Yes	Yes	Yes	Yes	Yes
Team*Time	No	Yes	Yes	No	Yes	Yes
Team*Time <sup>2</sup>	No	No	Yes	No	No	Yes
Observations	462	462	462	462	462	462
R-squared	0.636	0.731	0.763	0.669	0.774	0.802

Notes: Our sample consists of soccer players who have participated in at least 2 matches (as reserve or in the first team) in the seasons from 1980/81 to 2011/12. We choose those clubs that have been in the First Division of the Spanish League in at least 5 seasons in the pre-Bosman period and in 5 seasons in the post-Bosman period. The dependent variable is defined as the percentage of Spanish players per club and year. Robust Standard errors in parentheses. \*\*\*Statistical significance at 1%. \*\*Statistical significance at 5%. \* Statistical significance at 10% level.

Table 2: The impact of the Bosman Case on Spanish Soccer Players after adding controls

	(1)	(2)	(3)	(4)
Bosman 1-2	-4.958*** (1.561)	-7.877*** (1.701)	-6.534*** (1.684)	-5.593*** (1.906)
Bosman 3-4	-13.716*** (1.692)	-18.033*** (1.954)	-16.317*** (1.833)	-14.766*** (2.048)
Bosman 5-6	-10.016*** (1.768)	-14.345*** (2.337)	-12.818*** (2.044)	-11.223*** (2.691)
Bosman 7-8	-4.309** (1.753)	-8.985*** (2.743)	-8.565*** (2.435)	-6.147* (3.673)
Bosman 9-10	0.996 (1.997)	-3.615 (2.831)	-3.677 (2.806)	-0.885 (4.560)
Bosman 11-12	2.893 (2.093)	-2.595 (3.335)	-3.095 (3.048)	0.406 (5.565)
Bosman 13-14	-1.420 (2.385)	-6.972 (4.260)	-9.813*** (3.522)	-4.805 (6.703)
Bosman >15	1.537 (1.955)	-6.908** (3.430)	-6.828** (3.021)	-1.717 (6.522)
GDP per capita		-0.680*** (0.158)	0.337** (0.161)	0.140 (0.291)
King Cups		1.633*** (0.148)	1.496*** (0.114)	1.381*** (0.105)
Leagues		-0.840*** (0.131)	-0.976*** (0.111)	-0.671*** (0.159)
Mean age of players		1.747*** (0.370)	1.206*** (0.389)	0.857** (0.399)
Team FE	Yes	Yes	Yes	Yes
Team*Time	Yes	No	Yes	Yes
Team*Time <sup>2</sup>	Yes	No	No	Yes
Observations	462	462	462	462
R-squared	0.802	0.696	0.781	0.805

Notes: Our sample consists of soccer players who have participated in at least 2 matches (as reserve or in the first team) in the seasons from 1980/81 to 2011/12. We choose those clubs that have been in the First Division of the Spanish League in at least 5 seasons in the pre-Bosman period and in 5 seasons in the post-Bosman period. The dependent variable is defined as the percentage of Spanish players per club and year. The GDP per capita is measured in thousands of euros. Previous King's Cups include the number of previous cups. Previous leagues include the number of previous league championships. Robust Standard errors in parentheses. \*\*\*Statistical significance at 1%. \*\*Statistical significance at 5%. \* Statistical significance at 10% level.

Table 3: Classification of Teams by Regional TV

Teams	<i>Year of first Broadcast of the Regional TV</i>
Almería, Betis, Cádiz, Granada, Málaga, Recreativo de Huelva, Sevilla, Xerez	1989
Alavés, Athletic Club, Real Sociedad	1982
Albacete	2001
Atlético de Madrid, Getafe, Real Madrid, Rayo Vallecano	1989
Barcelona, Espanyol, Gimnàstic de Tarragona, Lleida, Sabadell	1984
Castellón, Elche, Hércules, Levante, Valencia, Villarreal	1989
Celta de Vigo, Compostela, Deportivo de la Coruña	1985
Extremadura, Mérida	2006
Las Palmas, Tenerife	1999
Logroñés	1998 <sup>1</sup>
Mallorca	2005
Murcia	2006
Numancia, Real Burgos, Salamanca, Valladolid	2009 <sup>1</sup>
Osasuna	1997 <sup>1</sup>
Racing de Santander	1995 <sup>1</sup>
Real Oviedo, Sporting de Gijón	2006
Real Zaragoza	2006

Notes:<sup>1</sup>Private Regional Televisions. The rest of regional television stations obtain their funding from their respective Regional Government. Source: Regional Television websites. The soccer clubs are classified by the region in which they normally play.

Table 4: The impact of the Bosman Case considering Regional Television

	(1)	(2)	(3)
Bosman 1-2	-4.958*** (1.561)	-4.976*** (1.562)	-5.296*** (1.764)
Bosman 3-4	-13.716*** (1.692)	-13.748*** (1.707)	-14.873*** (1.920)
Bosman 5-6	-10.016*** (1.768)	-10.050*** (1.770)	-11.309*** (2.219)
Bosman 7-8	-4.309** (1.753)	-4.333** (1.749)	-5.897** (2.500)
Bosman 9-10	0.996 (1.997)	0.960 (1.996)	-0.893 (2.977)
Bosman 11-12	2.893 (2.093)	2.906 (2.088)	0.993 (3.229)
Bosman 13-14	-1.420 (2.385)	-1.385 (2.387)	-3.464 (3.504)
Bosman >15	1.537 (1.955)	1.591 (1.980)	-0.352 (3.551)
Regional TV Dummy		-0.389 (1.514)	
TV 1-2			-0.345 (1.904)
TV 3-4			0.360 (1.826)
TV 5-6			-1.530 (1.861)
TV 7-8			-1.004 (2.440)
TV 9-10			0.757 (2.731)
TV 11-12			0.366 (2.639)
TV 13-14			1.227 (3.078)
TV >15			1.940 (3.624)
Team FE	Yes	Yes	Yes
Team*Time	Yes	Yes	Yes
Team*Time <sup>2</sup>	Yes	Yes	Yes
Observations	462	462	462
R-squared	0.802	0.802	0.803

Notes: Our sample consists of soccer players who have participated in at least 2 matches (as reserve or in the first team) in the seasons from 1980/81 to 2011/12. We choose those clubs that have been in the First Division of the Spanish League in at least 5 seasons in the pre-Bosman period and in 5 seasons in the post-Bosman period. The dependent variable is defined as the percentage of Spanish players per club and year. The information on the Regional TVs is in Table 3. Robust Standard errors in parentheses. \*\*\*Statistical significance at 1%. \*\*Statistical significance at 5%. \* Statistical significance at 10% level.

Table 5: The impact of the Bosman Case on the Spanish Soccer Players: Different Subsamples

	(1)	(2)	(3)	(4)	(5)	(6)
Bosman 1-2	-8.481*** (1.808)	-6.123*** (1.796)	-4.923** (1.976)	-9.329*** (1.710)	-6.864*** (1.797)	-4.317** (1.982)
Bosman 3-4	-18.514*** (2.189)	-15.479*** (2.044)	-13.479*** (2.249)	-20.104*** (2.113)	-17.949*** (2.062)	-13.707*** (2.412)
Bosman 5-6	-16.063*** (2.510)	-12.591*** (2.208)	-10.682*** (2.767)	-15.654*** (2.184)	-13.735*** (2.258)	-8.039** (3.210)
Bosman 7-8	-10.709*** (2.988)	-8.167*** (2.646)	-5.816 (3.848)	-8.169*** (2.637)	-7.191** (3.055)	-0.196 (4.605)
Bosman 9-10	-7.040** (3.065)	-4.685 (3.062)	-2.522 (4.768)	-4.052 (2.656)	-2.023 (3.708)	5.231 (6.039)
Bosman 11-12	-4.894 (3.723)	-2.594 (3.636)	-0.364 (6.107)	-6.545** (3.205)	-2.978 (4.542)	6.435 (7.614)
Bosman 13-14	-8.396* (4.764)	-9.006** (4.328)	-5.720 (7.496)	-8.217** (3.858)	-7.838 (5.386)	3.759 (9.412)
Bosman >15	-8.178** (3.817)	-6.157* (3.690)	-2.845 (7.104)	-8.633*** (3.263)	-5.039 (4.316)	8.139 (9.496)
Team FE	Yes	Yes	Yes	Yes	Yes	Yes
Team*Time	No	Yes	Yes	No	Yes	Yes
Team*Time <sup>2</sup>	No	No	Yes	No	No	Yes
Observations	398	398	398	630	630	630
R-squared	0.681	0.775	0.798	0.644	0.769	0.809

Notes: Our sample consists of soccer players who have participated in at least 2 matches (as reserve or in the first team) in the seasons from 1980/81 to 2011/12. In Columns (1) to (3), we choose those clubs that have been in the First Division of the Spanish League in at least 5 seasons in the pre-Bosman period and in 5 seasons in the post-Bosman period but excluding Real Madrid and FC Barcelona. Columns (4) to (6) incorporates all clubs participating in the First Division of the Spanish League during the period considered. The dependent variable is defined as the percentage of Spanish players per club and year. Robust Standard errors in parentheses. \*\*\*Statistical significance at 1%. \*\*Statistical significance at 5%. \* Statistical significance at 10% level.

Table 6: The impact of the Bosman Case, Kolpak case, and Cotonou Agreement

	(1)	(2)	(3)
Bosman 1-2	-4.958*** (1.561)	-3.687** (1.601)	-4.702*** (1.607)
Bosman 3-4	-13.716*** (1.692)	-11.573*** (1.845)	-13.262*** (1.827)
Bosman 5-6	-10.016*** (1.768)	-6.813*** (2.072)	-9.317*** (2.055)
Bosman 7-8	-4.309** (1.753)	0.186 (2.324)	-3.304 (2.258)
Bosman 9-10	0.996 (1.997)	-4.613** (2.319)	2.334 (2.711)
Bosman 11-12	2.893 (2.093)	-1.086 (2.098)	4.614 (3.301)
Bosman 13-14	-1.420 (2.385)	-3.599 (2.287)	-2.934 (1.991)
Bosman >15	1.537 (1.955)	1.828 (1.955)	0.626 (1.604)
Kolpak case		12.380*** (4.239)	
Cotonou Agreement			3.992 (4.567)
Team FE	Yes	Yes	Yes
Team*Time	Yes	Yes	Yes
Team*Time <sup>2</sup>	Yes	Yes	Yes
Observations	462	462	462
R-squared	0.802	0.805	0.802

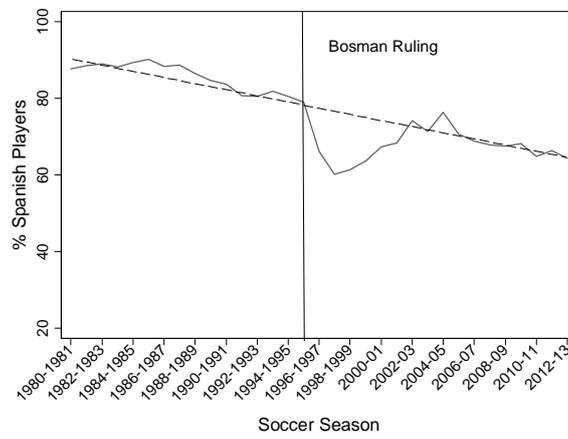
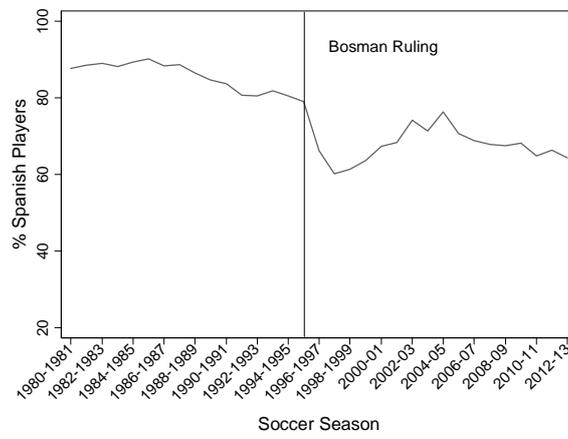
Notes: Our sample consists of soccer players who have participated in at least 2 matches (as reserve or in the first team) in the seasons from 1980/81 to 2011/12. We choose those clubs that have been in the First Division of the Spanish League in at least 5 seasons in the pre-Bosman period and in 5 seasons in the post-Bosman period. The dependent variable is defined as the percentage of Spanish players per club and year. Robust Standard errors in parentheses. \*\*\*Statistical significance at 1%. \*\*Statistical significance at 5%. \* Statistical significance at 10% level.

Table 7: The impact of the Bosman Case on the Behavior of Spanish Soccer Players

	(1)	(2)	(3)	(4)	(5)
	% Spanish Players	Proportion of Matches in First Team	Minutes per Match	Goals per Match	Yellow Cards per Match
Bosman 1-2	-4.958*** (1.561)	-0.028** (0.012)	-1.908 (1.196)	0.005 (0.004)	-0.523 (0.554)
Bosman 3-4	-13.716*** (1.692)	-0.033*** (0.012)	-2.555** (1.129)	-0.002 (0.004)	-0.364 (0.380)
Bosman 5-6	-10.016*** (1.768)	-0.037*** (0.012)	-3.440*** (1.106)	-0.003 (0.004)	-0.017 (0.090)
Bosman 7-8	-4.309** (1.753)	-0.029** (0.013)	-2.505** (1.232)	-0.006* (0.004)	-0.198 (0.217)
Bosman 9-10	0.996 (1.997)	-0.051*** (0.016)	-4.368*** (1.435)	-0.011*** (0.004)	-0.206 (0.223)
Bosman 11-12	2.893 (2.093)	-0.026 (0.017)	-2.225 (1.558)	-0.016*** (0.004)	-0.203 (0.231)
Bosman 13-14	-1.420 (2.385)	-0.046** (0.020)	-4.071** (1.829)	-0.014** (0.006)	-0.201 (0.240)
Bosman >15	1.537 (1.955)	-0.039 (0.026)	-3.288 (2.335)	-0.016** (0.006)	-0.203 (0.248)
Team FE	Yes	Yes	Yes	Yes	Yes
Team*Time	Yes	Yes	Yes	No	Yes
Team*Time <sup>2</sup>	Yes	No	Yes	No	No
Observations	462	462	462	462	462
R-squared	0.802	0.361	0.332	0.480	0.170

Notes: Our sample consists of soccer players who have participated in at least 2 matches (as reserve or in the first team) in the seasons from 1980/81 to 2011/12. We choose those clubs that have been in the First Division of the Spanish League in at least 5 seasons in the pre-Bosman period and in 5 seasons in the post-Bosman period. Robust Standard errors in parentheses. \*\*\*Statistical significance at 1%. \*\*Statistical significance at 5%. \* Statistical significance at 10% level.

**Figure 1**



Notes: Our sample consists of soccer players who have participated in at least 2 matches (as reserve or in the first team) in the seasons from 1980/81 to 2011/12.

Figure 2

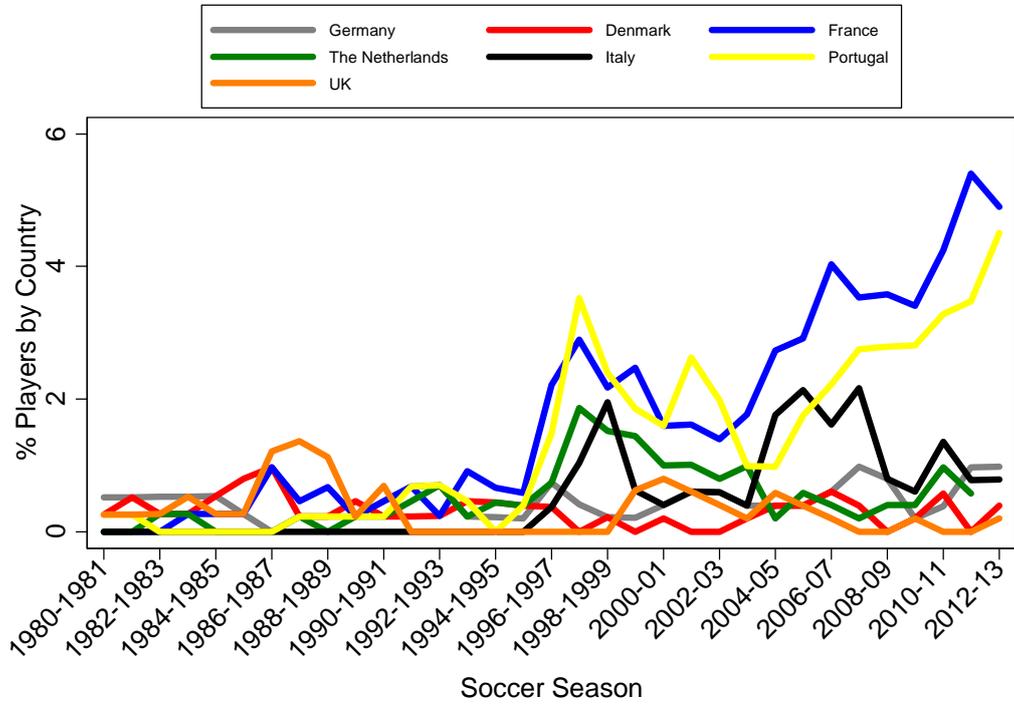


Figura 3

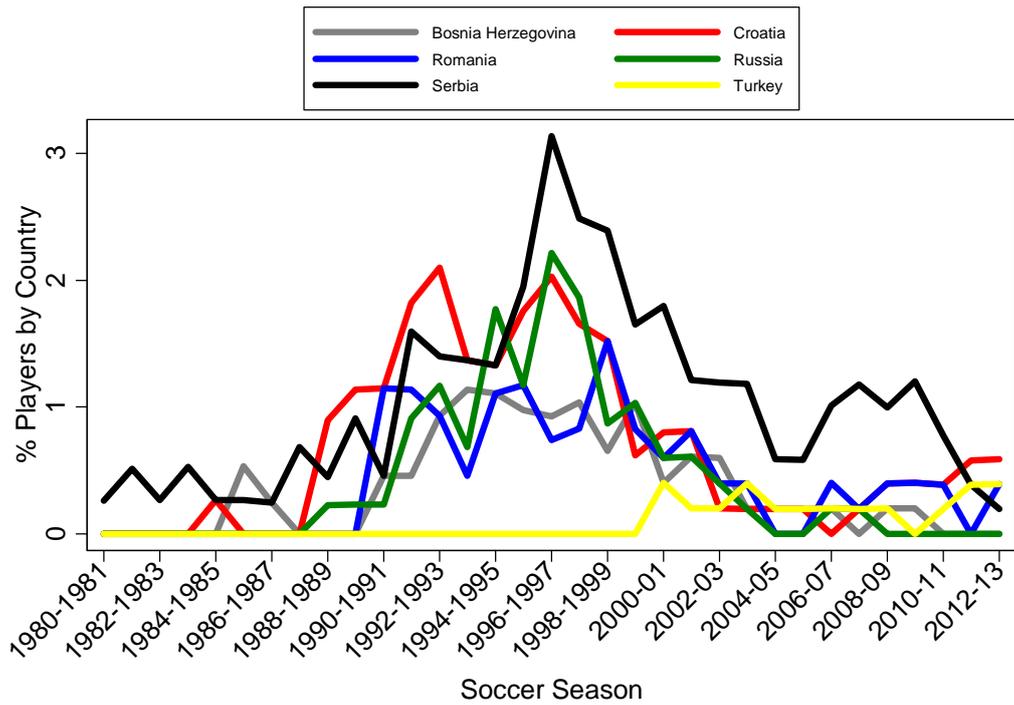


Figure 4

