

The unintended consequence of Financial Fair Play: An examination of competitive balance across five European football leagues

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Abstract

Purpose

This paper examines competitive balance in European football leagues before and after the inception of Financial Fair Play (FFP) regulations by UEFA in 2011, designed to bring about financial stability and improve competitive balance in the European game.

Design/Methodology/Approach

Our research focuses on the top division football leagues in England (English Premier League), Germany (Bundesliga), France (Ligue 1), Italy (Serie A) and Spain (La Liga). The paper is organised into two distinct time periods: pre FFP, comprising the six seasons between 2005/06 and 2010/11; and post-FFP, comprising the six seasons between 2011/12 and 2016/17. The paper uses recognised measures of concentration and dominance to measure competitive balance.

Findings

The results show a statistically significant decline in competitive balance post-FFP for leagues in Spain, Germany and France but not for England and Italy. Furthermore, the results report significantly higher levels of concentration and dominance by a select number of clubs in Germany.

Originality/Value

The paper is one of the first to analyse competitive balance in this way both pre and post-FFP. Whilst the paper cannot demonstrate a causal link between FFP and competitive balance, there are strong indications that competitive balance has been adversely affected (for some leagues) since the regulations have been imposed. To that end, the paper argues that FFP has had 'unintended consequences' in respect of competitive balance.

Keywords

Competitive balance; Financial Fair Play; European football; Competition; HICB; Dominance; UEFA.

Introduction

Against wider economic pressures, the European football market has grown exponentially over the course of the last two decades. A significant proportion of this growth is attributed to what is collectively known as the 'big five' leagues in European football, namely the English Premier League (England), Bundesliga (Germany), La Liga (Spain), Serie A (Italy) and Ligue 1 (France). Between them, these five leagues account for 54.5% of the total revenue generated by the whole market (€24.6billion). At the time of writing, the English Premier League sits comfortably above its main four rivals (from a revenue perspective) as the highest revenue generating league in European football, grossing €4.87 billion in 2015/16, over €2 billion ahead of its nearest rival the Bundesliga in Germany (€2.71 billion), with Spain (€2.44 billion), Italy (€1.92 billion) and France (€1.49 billion) lagging some way behind revenue list (Deloitte, 2017).

However, despite such increases in revenue, European football clubs have, in the past, found it difficult to balance the books. Indeed, at the turn of the last decade (2010), there was a growing concern about the financial plight of European club football with Storm and Nielsen (2012) stating that, despite ever-increasing revenues, clubs were still collectively failing to break-even. Net losses among the 734 European member clubs had increased by 760% over the five-year period between 2006-2011 (Franck and Lang, 2013) and European club football had a substantial debt problem.

It was against this backdrop that the governing body of the sport, the Union of European Football Associations (UEFA), intervened and introduced financial regulations titled 'Financial Fair Play' (FFP). FFP was implemented in 2011 and was designed with two primary objectives in mind. The first was to provide a means through which to introduce discipline and rationality to club finances to help safeguard the stability of European football (UEFA, 2015). In essence, clubs were being told to spend within their means (hence the

fundamental concept of 'break-even'). The second was the narrative that these regulations would enable the industry (and individual leagues) to become more competitively balanced. It is not clear whether or not the definition of competitive balance put forward by UEFA is aligned with the theoretical definition of competitive balance found in academic literature but it is evident that UEFA are indeed concerned with the concept of 'competition' between teams in their respective member leagues. It is still too early to suggest, empirically at least, that either objective is being met but there is some evidence that the general picture of financial performance is improving in some leagues linked to the first objective of FFP. Indeed, as financial regulations at both a European and domestic level continue to have an impact, in 2015/16 only Ligue 1 and Serie A of the 'big five' leagues recorded aggregate operating losses (Deloitte, 2017). However, there is very little evidence at the present time as to the veracity of the achievement of the second objective of FFP in relation to competitive balance.

Furthermore, there has been extensive criticism of the regulations in academic literature, particularly linked to suggestions that the regulations may in fact have an adverse effect on competitive balance and only actually maintain the status quo of keeping the top clubs at the top of the game (e.g. Lindholm, 2010; Plumley, Wilson and Ramchandani, 2017; Sass, 2014; Szymanski, 2014). Indeed, the UEFA president himself, Aleksander Ceferin, stressed recently that "the biggest challenge [to develop football in Europe] over the next few years will be competitive balance" (Inside World Football, 2017), something which, in theory at least, the FFP regulations should be doing.

Consequently, this study aims to analyse these suggestions further, by examining the competitive balance of the 'big five' leagues in European football in a post-FFP climate. We focus our analysis on two important points. First, we examine the trend in competitive balance pre and post-FFP using recognised measures of competitive balance. Second, we examine a unique measure of competitive balance in relation to individual leagues - the level

of dominance by a select number of clubs in terms of title wins and top four finishes (which usually means qualification for the flagship European football competition - the UEFA Champions League). Our paper contributes to both the academic and policy discussion surrounding this topic area and offers statistical insight into whether or not the FFP regulations have altered competitive balance in European football.

The rest of the paper is structured into the remaining sections. Next, the theoretical background and literature review is discussed before the methods section details the analysis undertaken. Following this, we present the empirical evidence from our study before discussing the implications and providing some concluding thoughts and recommendations for future research direction.

Theoretical Background and Literature Review

This section explores the existing body of literature related to the two main areas of enquiry based on the research aim; competitive balance and regulation in professional football. Both these areas can be traced to literature on the economic structure of professional team sports and the joint nature of production. Most of the theoretical literature in this area covers the debate between the operating objectives of North American versus European team sports leagues and this forms the conceptual framework for our study. However, a full review of this literature is not deemed necessary here as the discussion will be well known to scholars in the field. Readers are referred to Dobson and Goddard (2011), Leach and Szymanski (2015) and Wilson, Plumley and Barrett (2015) for confirmation of this received theory.

Competitive Balance

Professional team sports are intrinsically different from other businesses, in which a firm is likely to prosper if it can eliminate competition and establish a position as a monopoly

supplier (Dobson and Goddard, 2011). In sport, however, it does not pay for one team to establish such a position due to the joint nature of 'production' in sports. It is this notion that fundamentally drives the concept of competitive balance in professional team sport leagues. Their structure and regulations may have implications for competitive balance and, in turn, the 'product'. Indeed, in relation to successful sport leagues, Groot (2008) stated that "each competitor has an inherent interest in maintaining the health of their rivals" (p. 25). A potential implication in this context is that an excessively imbalanced competition might have a negative effect on fan interest and, hence, on demand (Kessenne, 2006; Zimbalist, 2003). Narrative surrounding fan interest in relation to competitive balance has led to two distinct strands of academic literature as outlined by Fort and Maxcy (2003). They categorise the theoretical and empirical literature on competitive balance in terms of: (1) analysis of competitive balance (ACB) literature, which focuses on what has happened to competitive balance over time or as a result of changes in the business practices of sports leagues; and, (2) literature on competitive balance that analyses its effect on fans, i.e. which tests the longstanding uncertainty of outcome hypothesis (UOH). It is the first of these approaches (i.e. ACB) that this research is concerned with given the need to track ACB over time against FFP regulations.

Freestone and Manoli (2017) provide an overview of some of the angles of enquiry relating to competitive balance studies that focus on league organisation that have previously been studied including talent distribution (e.g. Kessenne, 2006; Winfree and Fort, 2012), salary caps (e.g. Dietl, Lang and Rathke, 2011; Maxcy and Millwood, 2018), number of opponents, and participation in international competitions (e.g. Pawlowski, Breuer and Hovemann, 2010). Naturally, given the origins of the concept of competitive balance, there have also been a number of studies that cover ACB in sport leagues in North America (for

examples see: Lenten, 2015; Maxcy and Mondello, 2006; Mills and Fort, 2014; Price and Sen, 2003; Salaga and Fort, 2017; Zimbalist, 2002).

Previous research examining competitive balance in European football has almost exclusively focused on the aforementioned 'big five' leagues (England, France, Germany, Italy and Spain) and the findings present an inconclusive picture. For example, Goossens (2006) found no significant changes in competitive balance across the German, French and Spanish first divisions (1963/64 - 2004/05). Likewise, Groot (2008) presented similar findings for the French and Spanish first divisions (1946-2006). Michie and Oughton (2004) and Szymanski (2001) also found no significant changes in competitive balance in the French first division (1948-2004) and English first division (1978-1998) respectively.

Contrastingly, a number of other authors do report a decline in competitive balance in some European leagues, with some findings even being cited in the same studies above. For example Goossens (2006) found a decline in competitive balance in the English and Italian first divisions, whilst Groot (2008) reported similar findings for the English, German and Italian first divisions. Additionally, a number of more recent studies have stated a decline in competitive balance in the Spanish first division between 1928/29 - 2011/12 (Montes, Salagarrido and Usai, 2014) and the English first division (both as an individual league over time and compared to the rest of the English football league industry (three other divisions) between 1992/93 - 2015/16 (Plumley, Wilson and Ramchandani, 2017)). This finding was partially influenced by the financial disparity between clubs in the EPL and the Football League. The financial disparity between clubs in the EPL and the Football League (in particular the Championship) and the impact on competitive balance has since been further confirmed by Wilson, Ramchandani and Plumley (2018) who found that parachute payments (payments paid to relegated clubs from the EPL) were having a negative impact on the overall competitive balance of the Championship between the years 2006/07 and 2016/17.

Hypothetically, a decline in competitive balance and an increase in financial disparity between clubs and leagues, could lead to a situation whereby a league is dominated by a select number of clubs. Indeed, there has already been evidence to suggest that this is potentially happening in the EPL in a paper by Curran, Jennings and Sedgwick (2009). Their paper focused more on measures of dominance to track competitive balance over time in the EPL. The authors formulated a “Top 4 Index” by counting the number of occasions that each team finished a league season in the top four places, summing the incidence of the four teams with the most occurrences and expressing the total as a proportion of the total number of available places over the period of the measure. They calculated values from the 1948/49 to 2007/08 seasons (inclusive) and for ten year intervals. Their findings suggested that competitive balance in the English top league has decreased and that the league is in danger of becoming a monopoly of the few. Our study examines this issue further by considering whether or not the FFP regulations are assisting the maintaining of certain monopolies by a select number of clubs across the major European leagues.

The contrasting nature of these findings means that there is an area of disagreement amongst academics in relation to competitive balance. For example, Pawlowski (2013) states that it may be that the empirical evidence is 'wrong' because the proxies used to measure competitive balance are inadequate. Indeed, the measurement of competitive balance has a long history of competing methods (Freestone and Manoli, 2017; Martinez and Willner, 2017). There is also an academic argument that competitive balance is not as important as previously suggested in past studies (e.g. Andreff and Scelles, 2015; Pawlowski and Anders, 2012; Scelles, Durand, Bonnal, Goyeau and Andreff, 2013) but these papers focus more on analysing competitive balance against the concept of UoH and fan attendance.

Financial Fair Play Regulations

The dynamics of competition in club football have led to a situation where wealth is one of the most important competitive drivers (Franck, 2010; Freestone and Manoli, 2017). Arguably, this is nothing new; financial resources have always been integral to the success of football clubs historically, although the situation became exacerbated around the mid-2000s due to two factors in particular. First, a significant number of football clubs across Europe were financially unstable. Many individual clubs had unsustainable debt levels and numerous academics cited a 'financial crisis' across many European football leagues including France (Andreff, 2007), Spain (Ascari and Gagnepain, 2007), Portugal (Barros, 2006), England (Buraimo, Simmons and Syzmanski, 2006) and Germany (Dietl and Franck, 2007).

However, despite this scenario, very few football clubs actually went into administration and ceased to exist, something which could conceivably happen if a 'normal' business was consistently recording high-losses. This is partly due to the recognised ideal that the survival of football clubs is viewed as highly desirable in a wider social context which means that there is reluctance, particularly among state creditors, to liquidate a football club (Freestone and Manoli, 2017). It is this unique position of power that football clubs hold that leads us to the second significant factor. This factor has been termed by some commentators as 'financial doping' and concerns the practice of relying on significant funding from external benefactors in order to cover perpetual losses, thus gaining a financial advantage over the competition (Muller, Lammert and Hovemann, 2012). Again, this is not necessarily a new phenomenon (wealthy benefactors have often propped-up football clubs financially), yet it has taken greater precedence over the last twenty years as the amount of money coming into the game has increased. As such, these external benefactors have also been referred to as 'sugar daddies' and have invested enormous sums of money to the clubs that they have acquired an interest in, typically in the pursuit of prestige and sporting success and with little or no regard for the financial losses that such endeavours required (Lang, Grossman and

Theiler, 2011). The application of the term 'doping' in this context is indicative of clubs' attempts to gain an illegitimate advantage through the artificial manipulation of the natural competitiveness inherent in sport (Schubert and Konecke, 2015, Freestone and Manoli, 2017). Whether or not such a powerful term as 'financial doping' is required in this context is open to debate but evidence does confirm a decline in competitive balance across major European football leagues during the last two decades (Ramchandani, Plumley, Boyes and Wilson, 2018), a time period that coincides with an increasing amount of revenue and external investment in the game.

It was against the backdrop of the implications of 'financial doping' that UEFA introduced its own FFP regulations, which were designed to regulate the financial behaviour of clubs competing in UEFA club competitions (Freestone and Manoli, 2017). It is worth noting here that because these regulations only apply to clubs that compete in UEFA competitions (a maximum of 235 clubs out of 734 in Europe's top-divisions each season) other national associations across Europe (including the EPL and the Football League in England for example) have implemented their own versions of FFP regulations in their respective league systems (Szymanski, 2014). FFP has two main objectives; the no overdue payables rule and the break-even rule (Peeters and Szymanski, 2014). Within the break-even rule, there is also a stipulation that losses can be incurred to account for transitions in business practice (defined as "acceptable losses"). Presently, the acceptable loss permitted is based on a 3-year rolling average and has a cumulative total of €30m for the seasons 2015/16, 2016/17 and 2017/18 (UEFA, 2015). Various other adaptations of FFP around Europe differ slightly in terms of specific details but are all derived from UEFA's FFP regulations and, therefore, have the same legal framework (Freestone and Manoli, 2017).

However, despite the positive intentions of FFP to bring about financial sustainability in European football, the regulations themselves have received a number of criticisms. These

criticisms are centred on: the legality of the FFP (e.g. Long, 2012; Peeters and Szymanski, 2014; Szymanski, 2014); the impact of FFP on the quality of all teams (e.g. Drut and Raballand, 2012; Madden, 2012); the impact that FFP could have on player wages (e.g. Dietl, Franck and Lang, 2009; Peeters and Szymanski, 2012; Preuss, Haugen and Schubert, 2014); and the fact that FFP actually prevents the industry (and clubs) from benefitting from substantial injections of external financing (e.g. Madden, 2012; Franck, 2014). The final criticism here is perhaps most pertinent to the paper in respect of what impact the FFP regulations may have on competitive balance. Constraining clubs to spend within their means is fine in principal (from a business perspective) but this will be dependent on the clubs own market potential, meaning a club with a bigger market potential will outperform a club with smaller market potential, thus making it difficult for smaller clubs to compete (Lindholm, 2010; Sass, 2012). The effect of this would be to further cement the existing hierarchy of European club football; strengthening the power of the wealthiest clubs by constraining the smaller clubs (Sass, 2014; Szymanski, 2014). Vopel (2013, p.17) confirms this point by stating that the spending power provides the true competitive advantage in football, making it "almost impossible to catch-up to bigger clubs without external funding". The 'big five' leagues in European football have historically been characterised by competitive imbalance and dominance by a select number of clubs (Ramchandani *et al.*, 2018).

These findings are at odds with the theoretical structure of sport leagues in professional team sport. FFP was devised to negate a volatile financial situation in the European football market. However, we question whether or not the FFP regulations have had 'unintended consequences' when it comes to competitive balance. This paper will provide empirical evidence against this question by considering competitive balance in the 'big five' European football leagues pre and post the implementation of FFP.

Methods

Our research focuses on the top division football leagues in England (English Premier League), Germany (Bundesliga), France (Ligue 1), Italy (Serie A) and Spain (La Liga). At the time of writing there have been six completed seasons in each of these leagues following the formal introduction of FFP regulations in 2011. In order to examine changes in competitive balance in each league before and after FFP was introduced, we organised our study into two distinct time periods: pre FFP, comprising the six seasons between 2005/06 and 2010/11; and post-FFP, comprising the six seasons between 2011/12 and 2016/17.

There are a variety of measurement techniques used when considering competitive balance in professional team sports, which have their respective strengths and weaknesses (see Mills and Fort, 2014; Owen and King, 2015). Our analysis utilises Mitchie and Oughton's (2004) Herfindahl Index of Competitive Balance (HICB) to measure within-season competitive balance which is an industry standard measure adapted from the Herfindahl-Hirschman Index. The rationale for using HICB to measure overall league concentration is two-fold. First, it has been used in previous academic research focusing on football leagues (see for example, Pawlowski et al., 2010; Plumley et al., 2017); second, it allows comparisons between leagues, with a different number of teams and, within leagues when the number of teams changes over time. HICB scores were calculated using the following formula:

$$(HHI / (1/n)) \times 100 \quad (1)$$

where *HHI* is the sum of the squares of the points share for each club contesting a league in a given season and *n* is the number of teams in that particular league and season. For a perfectly balanced league of any size, the index takes a value of 100. As the index rises, competitive balance declines.

Our research also examined specific aspects of competitive balance that are likely to be of interest to both fans and league authorities: competition for the title and competition for survival. Our approach to this analysis utilises the methods proposed by Plumley et al. (2017) in their analysis of the English football league system. For all five leagues, competition for the title was measured using the formula:

$$TG = PPM_1 - ((PPM_2 + PPM_3 + PPM_4)/3) \quad (2)$$

where TG is the title gap between the points per match won by the team finishing first (PPM_1) and the average points per match won by other likely title contenders, who were judged to be the teams that finished second (PPM_2), third (PPM_3) and fourth (PPM_4).

To investigate the competition for survival, we used the following formula to compare the average points per match of the teams ranked in the bottom three places in each league with the equivalent number of teams that finished immediately above them in the league:

$$SG = ((PPM_{n-3} + PPM_{n-4} + PPM_{n-5})/3) - ((PPM_n + PPM_{n-1} + PPM_{n-2})/3) \quad (3)$$

where SG is the survival gap, PPM is points match of a team and n refers to the total number of teams in each league. For example, in the EPL, n is equal to 20, so $n-1$ equals 19, $n-2$ equals 18 and so on.

An independent sample t-test was used to establish whether the differences in the competitive balance scores for HICB, title gap and survival gap in each league before and after FFP were statistically significant. A further piece of analysis, informed by previous research by Syzmanski and Kuypers (1999) and by Curran, Jennings and Sedgwick (2009), was to examine the levels of dominance in each league pre FFP and post-FFP including the number of different teams to win the league title and the number of different teams to finish in the top four positions.

Results

HICB

Figure 1 shows the mean HCB scores for each league for the six seasons immediately prior to the implementation of FFP (from 2005/06 to 2010/11) and for the six seasons immediately following the implementation of FFP (from 2011/12 to 2016/17). For all five leagues the post-FFP mean HICB score was found to be higher than their pre-FFP mean HICB score. The variation between the pre and post-FFP mean HICB scores appears to be most prominent for Spain and least pronounced for England. An independent samples t-test confirmed that the mean difference in HICB scores pre and post-FFP was statistically significant for Spain ($t(10) = -3.235$, $p = 0.009$), Germany ($t(10) = -2.740$, $p = 0.021$) and France ($t(10) = -2.244$, $p = 0.049$) but not for England ($t(10) = -.340$, $p = 0.767$) and Italy ($t(10) = -.868$, $p = 0.406$).

<Figure 1 about here>

Title and survival gap

For each league examined pre and post-FFP, Figure 2 shows the difference in the points achieved by the team that won the league title and the average number of points achieved by the teams that finished in second, third and fourth place (i.e. title gap). This difference is expressed on a 'points per match' basis to facilitate a better comparison between the different European leagues. For example, each team in the EPL contests 38 matches whereas those in the Bundesliga contest 34 matches. Lower gap scores in Figure 2 indicate better competition for the title. For the pre and post-FFP time periods, Figure 2 also shows the absolute gap between the average points per match achieved by the bottom three teams in each league and the average points per match achieved by the equivalent number of teams finishing immediately above them (i.e. survival gap).

<Figure 2 about here>

At face value, there has been an increase in the title gap in all five leagues in the post-FFP period accompanied by an increase in the survival gap for three leagues. However, with the exception of the pre and post-FFP title gap for Germany ($t(10) = -4.150$, $p = 0.02$), no significant differences were detected ($p > 0.05$) for the other leagues by an independent sample t-test.

Dominance

Table 1 presents the different teams that have won the domestic league title and the title-winning frequency of each team pre and post-FFP. Based on this data, in Figure 3 we have plotted the number of different teams in each of the five leagues to have won their domestic league title during the six seasons between 2005/06 and 2010/11 (pre-FFP) on the horizontal axis against the corresponding figure for each league during the six seasons between 2011/12 and 2016/17 (post FFP) on the vertical axis. The axes intersect at the median scores for the pre and post-FFP time periods (3 in each time period).

<Table 1 about here>

<Figure 3 about here>

It can be seen that five different teams won the domestic league title in Germany in the pre-FFP period, which reduced to just two in period following the implementation of FFP. An increase in dominance of one or a few teams is also evident in the case of the domestic leagues in Italy (3 league title winners pre FFP v 1 post FFP) and France (4 pre FFP v 3 post FFP). Conversely, in the case of England and to a lesser extent Spain, there appears to have been a reduction in dominance for the league title with more teams winning the domestic title in these leagues in the post-FFP period.

If we broaden our analysis to consider the dominance for the top four positions in each league (see Table 2 and Figure 4), then we find improvements in Spain (+2), England

(+1) and Italy (+1) by virtue of more teams securing a top four finish in these leagues post-FFP. Two fewer teams finished in the top four positions in Germany post-FFP. There was no change noted in the case of France, with Ligue 1 continuing to be the least dominant relative to the other European leagues examined.

<Table 2 about here>

<Figure 4 about here>

Discussion

Our results provide mixed findings in relation to the 'big five' leagues in European football in a post-FFP climate but they do reveal some interesting discussion points regarding competitive balance in European football post-FFP. Descriptively, all leagues have seen a decline in competitive balance post-FFP. Furthermore, this decline is statistically significant for the leagues in Spain, Germany and France - although the French league still has better levels of competitive balance in relation to the rest. For England and Italy, there is no significant difference in the levels of competitive balance pre and post-FFP. In respect of England, our findings are in line with Freestone and Manoli (2017) who found no indication that the FFP regulations have resulted in a decline in competitive balance in the EPL, instead hinting that a positive effect may have been caused. Our results, however, do not confirm this positive link, with evidence suggesting that the overall balance of the league has declined but not significantly when analysed statistically. Furthermore, the decline in competitive across all five European leagues is indicative of past research in the field, confirming the findings of a number of authors including Goossens (2006), Groot (2008), Montes *et al.* (2014), Plumley *et al.* (2017) and Ramchandani *et al.* (2018).

In relation to competition for the title, survival and measures of dominance, our results again point to mixed evidence. All five leagues have seen an increase in the gap for

the title race, indicating that whichever club(s) are winning the league are winning by bigger points margins. Additionally, for Italy, France and Germany, the number of different title winners has decreased since the advent of FFP. Germany was also the only league to see a reduction in the different number of teams that finished in the top four positions post-FFP.

The standout discussion point in our results is the case of the German Bundesliga. In relation to all our measures of analysis, the Bundesliga performed poorly and saw a significant decline in competitive balance and a significant increase in the gap for the title as well as seeing fewer title winners and fewer clubs finishing in the top four positions in total. In this case, the standout performer (from a sporting perspective) was Bayern Munich (5 title wins and 6 top four finishes in 6 seasons post-FFP) whilst the rest struggled to match their dominance. It can be argued from the data that Bayern Munich are creating a monopoly in German football, similar to what Curran *et al.* (2009) suggested was happening in English football with a select number of clubs, and certainly something which goes against the fundamental premise of competition in professional team sports (Dobson and Goddard, 2011).

The findings for Germany are also interesting given the ownership structure of clubs in Germany and the 50+1 rule. Indeed, associations (Verein in German) hold 50% plus one voting right of any football club company, which then limits the power of clubs financiers (Dietl and Franck, 2007). This system means that, historically, German clubs have been averse to financial takeovers and whilst from a positive perspective this means that clubs are unlikely to accumulate debts over a long period (especially since its indebtedness capacity is low) (Franck, 2010) it can also be to the detriment of clubs that are trying to improve their performance within such a system as they cannot catch-up to the bigger clubs without external funding (Vopel, 2013).

A case in point here is the situation of RB Leipzig, who has circumvented some of this regulation in Germany to a certain extent. Leipzig was only founded in 2009 when Red Bull (the energy drinks company that own the club) acquired the license of a now-obsolete fifth-tier club. Since then, Leipzig secured four promotions in seven years to join Germany's top flight in 2016/17, consequently finishing second and qualifying for the UEFA Champions League. However, the latest figures available show that Leipzig owe Red Bull €83m (Word Soccer Talk, 2018) and there have been suggestions as to whether or not the club is acting within the spirit and ethos of the league in regards to ownership structure. Irrespective of this, it is a clear example of Vopel's (2013) point surrounding the necessity of external funding in football clubs to catch the established elite. Interesting, at the time of writing, the German clubs have decided to retain the 50+1 rule after there were discussions about relaxing the regulations to spur outside investment (First Post, 2018) despite the CEO of the DFL stating that he finds the rule 'a little excessive'. The role of external investors here is also particularly important in this context with reference to the extant literature surrounding 'sugar daddies' (Lang, Grossman and Theiler, 2011). These external investors/benefactors have had a significant impact in some European football leagues in recent years (in particular the EPL) and have invested enormous sums of money to the clubs that they have acquired an interest in, something which may also have impacted on club financial performance in both pre and post-FFP climates.

Whilst we cannot obviously claim causation in respect of FFP in the context of our results, we can partially attribute a decline in competitive balance to the sizeable financial gap that has developed between clubs during this period, caused in part by increases in prize money, primarily generated by income received from broadcasting contracts in respective leagues and through pan-European competitions such as the UEFA Champions League (Pawlowski *et al.*, 2010). Despite some of the broadcasting distributions offering shared

revenue for certain proportions of the deal across individual leagues, there is no true revenue sharing across European team sports. This leads to a situation whereby the wealthiest and most successful clubs continue to earn a significant share of that income stream, to the detriment of other clubs in the league (Szymanski and Kesenne, 2004; Lee and Fort, 2012). With reference to Germany and Spain (two leagues where there has been a significant decline in competitive balance post-FFP) both have just moved to a more collective distribution of their broadcasting rights amongst clubs whereas previously clubs were free to negotiate their own rights (meaning that Barcelona and Real Madrid in Spain and Bayern Munich in Germany were able to hold monopoly power in relation to broadcasting income). In contrast, the EPL has one of the most equal broadcasting distribution mechanisms to clubs and this league has not seen a significant change in competitive balance for the time period studied. It is too early to tell at this stage whether or not a move to a more collective distribution will benefit the competitive balance of these leagues (Germany and Spain) and future research is needed in this area once the figures become available. Additionally, we have not empirically tested for competitive balance against TV deals and subscriptions so it is important not to generalise here and recognise that there are also other potential factors at play.

The aims of the FFP regulations laid out earlier in the study provide some interesting reflection points and questions for further discussion in light of our findings. As suggested in some of the figures provided by Deloitte (2017) in their *Annual Review of Football Finance* publication, the regulations appear to be having an impact, generally speaking, on financial health. However, whilst we cannot say that FFP is causal, because of significant other factors being at play, our results do indicate a general decline in competitive balance for the big five European leagues since the introduction of the regulations. With this in mind, and given that FFP limits the losses a club can make and external investment into the club, how are the smaller clubs ever going to close the gap to the bigger clubs both financially and on the

pitch? Will the regulations, in their current format, only serve to maintain the status quo in European football? We have provided statistical evidence that this may be the case for some of these leagues in a post-FFP climate, in particular the German Bundesliga.

Conclusion

This study set out to analyse the level of competitive balance in the 'big five' European football leagues by measuring the six seasons post-implementation and the six seasons prior to the regulations being introduced. There have been a number of criticisms levelled at FFP in past academic papers, particularly in relation to competitive balance and the preservation of the status quo of the wealthy elite clubs (Sass, 2014; Szymanski, 2014). The results from this study, in part, provide evidence to support such claims, particularly in the context of the elite leagues in Germany, Spain and France. Furthermore, under the current regulations it will also be difficult for any of the 'smaller' clubs to close this gap given that the regulations limit significant external investment. Thus, clubs must look to other long-term financing strategies or innovation in their strategic direction to be able to compete. However, innovation and long-term financing will only get you so far in respect of the revenue that you can actually generate. Under a break-even principle, the clubs that earn more will ultimately always have more to spend. There is no doubt that FFP was introduced with good intentions but it may have had an unintended consequence in relation to the competitive balance of European football leagues.

Our study is the first of its kind to test for changes in competitive balance in domestic European football leagues post-FFP. However, it is premature to draw definitive conclusions at this stage for three reasons. First, our analysis indicates mixed evidence of changes in CB in terms of the five leagues analysed. Second, in leagues where there has been a significant decline in CB, a causal link with FFP cannot be established with certainty. Third, given that there are 54 domestic top-division football leagues in Europe, we feel that it is difficult to

provide definitive implications towards UEFA at this stage without investigating changes in CB across all European leagues.

There are a number of future research recommendations that will help provide more empirical evidence on this topic area. First, it is necessary to obtain a full European picture on competitive balance, incorporating all national football associations that make up UEFA. This would allow for a full industry picture and it would allow conclusions to be drawn about the potential wealth gap between the 'big five' leagues in Europe and the rest. Second, it would be useful to analyse the data on competitive balance alongside the financial health of European football clubs both pre and post-FFP given the two primary objectives of the regulations. This would enable us to see whether or not the regulations are doing what they set out to do in practice. A third potential area for future research is to replicate this study and the additional areas above focusing solely on the UEFA Champions League and UEFA Europa League (and the clubs within it) to see whether or not there has been a change in the competitive balance of this competition. This would enable like-for-like comparisons in relation to the regulations as all clubs that compete in these competitions (235 each season) as they would all have to conform to the UEFA FFP regulations. Further research into the impact of FFP on the European football industry is paramount moving forward both in relation to understanding the changing business models of clubs in this climate and how this can manifest into maintaining healthy competition between clubs in individual league structures.

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Figure 1: Mean HICB scores by league pre and post FFP

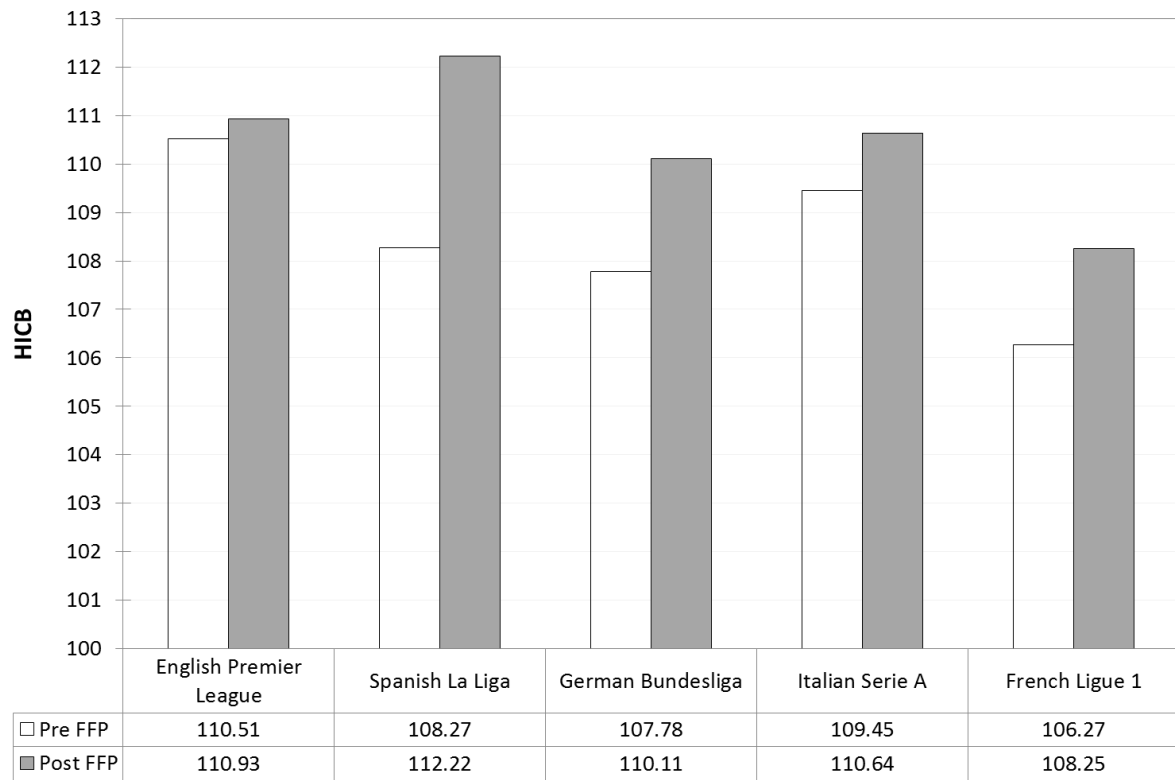


Figure 2: Title and survival gap by league pre and post-FFP

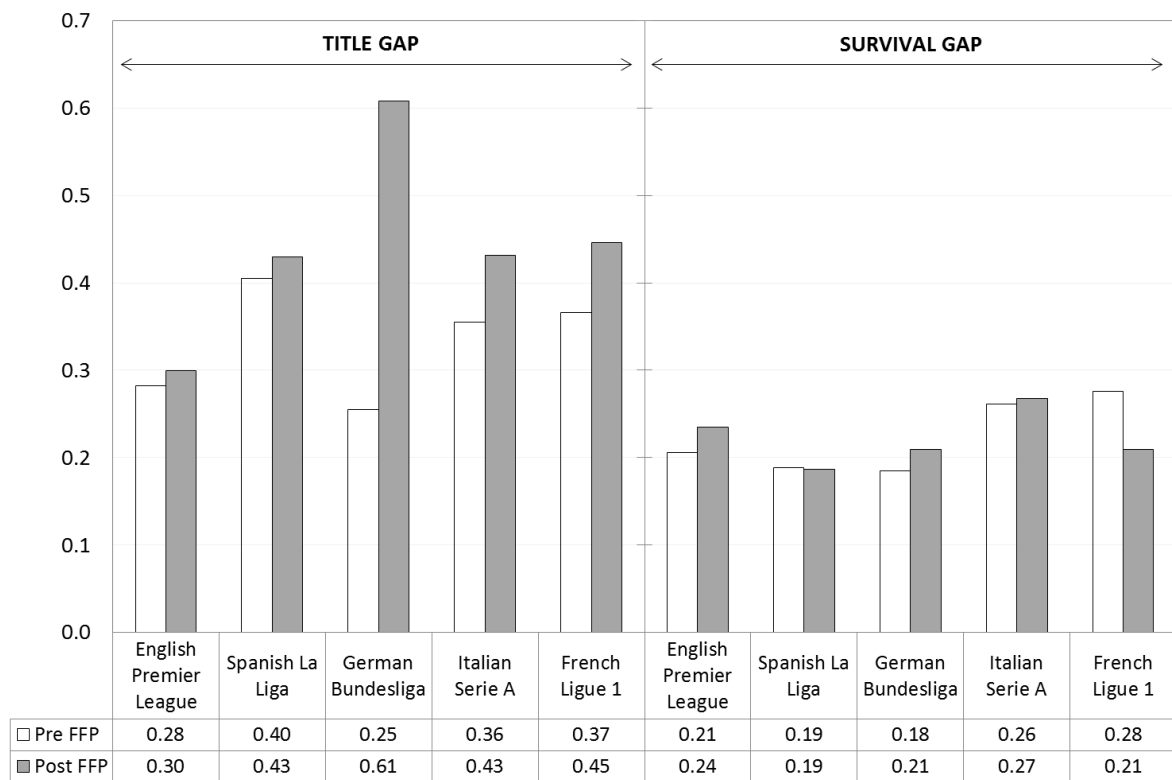


Table 1: Teams winning the domestic league title by league pre and post FFP

League	Team	Pre FFP	Post FFP
Premier League	Manchester United	4	1
Premier League	Chelsea	2	2
Premier League	Manchester City	0	2
Premier League	Leicester City	0	1
Bundesliga	Bayern Munich	2	5
Bundesliga	Borussia Dortmund	1	1
Bundesliga	VfB Stuttgart	1	0
Bundesliga	VfL Wolfsburg	1	0
Bundesliga	Werder Bremen	1	0
Ligue 1	Lyon	3	0
Ligue 1	Bordeaux	1	0
Ligue 1	Lille	1	0
Ligue 1	Marseille	1	0
Ligue 1	Paris Saint-Germain	0	4
Ligue 1	Monaco	0	1
Ligue 1	Montpellier	0	1
La Liga	Barcelona	4	3
La Liga	Real Madrid	2	2
La Liga	Atletico Madrid	0	1
Serie A	Inter Milan	4	0
Serie A	Juventus	1	6
Serie A	AC Milan	1	0

Figure 3: Number of different teams to have won the domestic league title (pre FFP v post FFP)

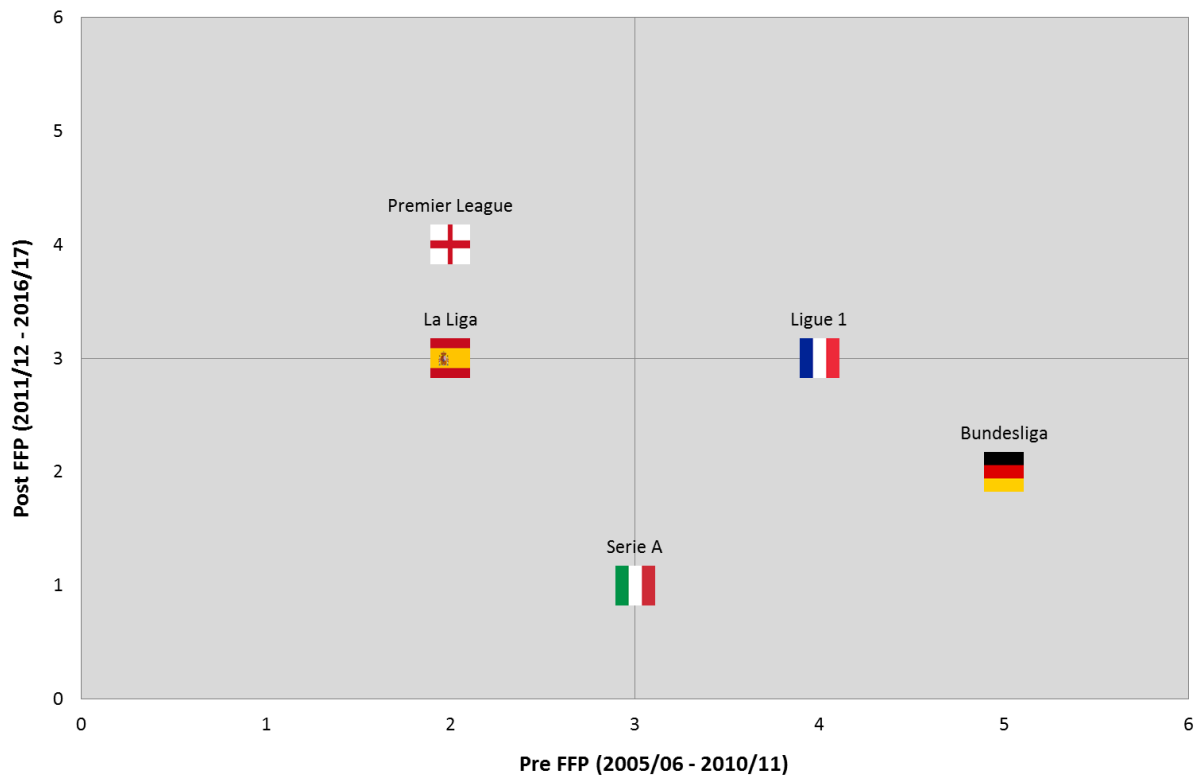
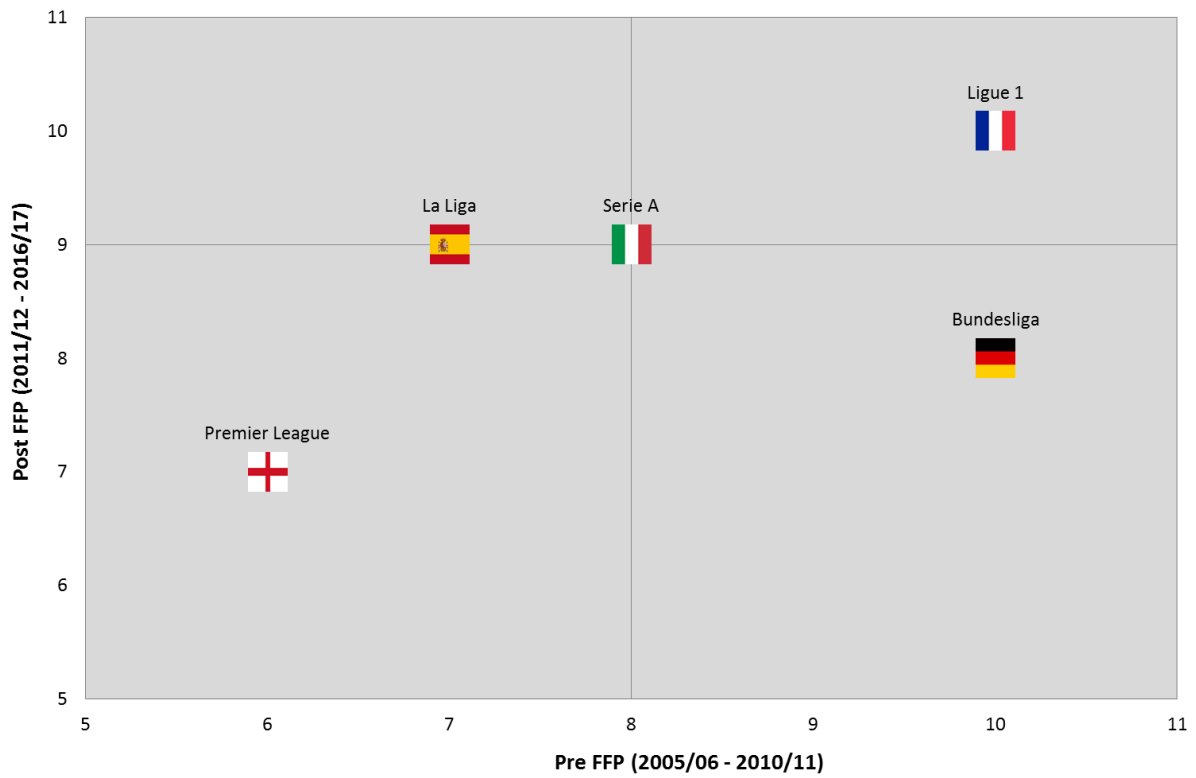


Table 2: Teams securing a top four place by league pre and post FFP

League	Team	Pre FFP	Post FFP	League	Team	Pre FFP	Post FFP
Premier League	Arsenal	6	5	La Liga	Barcelona	6	6
Premier League	Chelsea	6	4	La Liga	Real Madrid	6	6
Premier League	Manchester United	6	3	La Liga	Valencia	4	2
Premier League	Liverpool	4	2	La Liga	Sevilla	3	1
Premier League	Manchester City	1	6	La Liga	Atletico Madrid	2	5
Premier League	Tottenham	1	3	La Liga	Villarreal	2	1
Premier League	Leicester City	0	1	La Liga	Osasuna	1	0
Bundesliga	Bayern Munich	5	6	La Liga	Athletic Bilbao	0	1
Bundesliga	Schalke 04	4	3	La Liga	Malaga	0	1
Bundesliga	Werder Bremen	4	0	La Liga	Real Sociedad	0	1
Bundesliga	Bayer Leverkusen	2	4	Serie A	Inter Milan	6	1
Bundesliga	VfL Wolfsburg	2	1	Serie A	AC Milan	5	2
Bundesliga	Hamburg SV	2	0	Serie A	Fiorentina	4	3
Bundesliga	VfB Stuttgart	2	0	Serie A	Juventus	3	6
Bundesliga	Borussia Dortmund	1	5	Serie A	AS Roma	3	4
Bundesliga	Hannover 96	1	0	Serie A	Napoli	1	4
Bundesliga	Hertha Berlin	1	0	Serie A	Udinese	1	1
Bundesliga	Borussia Monchengladbach	0	3	Serie A	Sampdoria	1	0
Bundesliga	1899 Hoffenheim	0	1	Serie A	Lazio	0	2
Bundesliga	RB Leipzig	0	1	Serie A	Atalanta	0	1
Ligue 1	Lyon	6	5				
Ligue 1	Marseille	5	2				
Ligue 1	Lille	3	2				
Ligue 1	Bordeaux	3	0				
Ligue 1	Toulouse	2	0				
Ligue 1	Paris Saint-Germain	1	6				
Ligue 1	AJ Auxerre	1	0				
Ligue 1	AS Nancy Lorraine	1	0				
Ligue 1	Lens	1	0				
Ligue 1	Stade Rennes	1	0				
Ligue 1	Monaco	0	4				
Ligue 1	Nice	0	3				
Ligue 1	Montpellier	0	1				
Ligue 1	St Etienne	0	1				

Figure 4: Number of different teams to have finished in the top four league positions (pre FFP v post FFP)



Note: The axes intersect at the median HICB scores for the two time periods (8 pre FFP and 9 post FFP).