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1.0 Introduction

“With Premier League clubs set to benefit from increased revenue due to their record television contracts in 2016/17, there is a strong chance that almost all Premier League clubs will be in the top 30 revenue generating clubs next year” – Deloitte, 2017

Since the new English broadcasting cycle started in 2016/17, the Premier League has continued to power ahead of the other four dominant European leagues in terms of total revenue generation. As a result of the new three-year television-contract the Premier League is expected to bank a total of € 5bn in total revenue in 2017/18. This is almost twice as much income as the German and Spanish leagues are projected to generate over the same period (Deloitte, 2017).

While the relationship between financial performance and sporting success have been vastly researched over the years, the impact of the new English TV-deal on Premier League clubs and their international success, has not been explored that extensively. Our research will try to examine the impact of the new Premier League broadcasting deal, and how the English clubs superior economic revenue and position influence their international sporting success, compared to their European counterparts. By first looking at how the increased income from the record-breaking television-deal affect parameters such as salaries and player acquisitions, we will secondly investigate whether there is a correlation between increased broadcasting-revenues, salaries and international sporting success. Conclusively we will observe whether there are any trends indicating that the English clubs financial superiority is reflected through their sporting results in the largest European tournaments.

By addressing the above-mentioned topics, we have decided on the following research question: *“Will a football club’s financial performance and value always reflect its sporting success?”*

Furthermore, by taking the new English broadcasting deal and the increased salary-levels into account, our sub-research questions are as follows:

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- *“Will the new broadcasting deal make the English clubs a more dominant force in European club competitions?”*
 - *“Will the increased gap in salary-levels, influence on the English clubs international sporting success?”*

These two sub-questions will be the foundation for our hypotheses presented in the next section of our paper.

2.0 Literature review

2.1 General part

We have divided our literature review into two sections, one general part and one context part. In this general part we present previous research that have been done on topics similar to the relationships and correlations that we intend to investigate.

2.1.1 Relationship between financial performance and sporting success

Theoretical and empirical researches that explain the relationship between a clubs financial performance and sporting success have emerged in the last twenty years. In 1997, researchers Szymanski & Smith developed an empirical model that measured the financial performance of English League clubs from 1974 to 1989. The researchers illustrate that there exist a linear relationship between profit margins and league position, and that revenue is a function of league performance measured as odds ratio of league position.

In a paper from 1999, Szymanski & Kuypers extended this empirical model. By using a selection of English football league clubs they developed a regression analysis to show how league position is a driver for revenues.

Dobson and Goddard (1998) on the other hand, applied causality and co-integration tests in their research of 77 Football League clubs. Unlike Szymanski & Smith (1997) and Szymanski & Kuypers (1999), the researchers found more evidence that causality goes from lagged revenue to performance, rather than from performance to revenues.

In their paper from 2016, researchers Rohde & Breuer investigated the relationship between financial growth and sporting success. Analyzing the revenues of the top 30 European football clubs over ten consecutive seasons from

2004-2013 they found that financial success is driven by sporting success, as well as brand value. Through their regression models they found that sporting success was driven by team investments, and that team investments tend to be driven by (foreign) private majority investors.

Another important premise for both financial and sporting success is brand investments. In his research from 2004, Grundy illustrates this by highlighting the success-story of Manchester United. Working persistently together with first class partners, the English club develops new products and services that have a global appeal to their worldwide fan base. By converting more fans into customers, Manchester United were able to enhance their financial performance and ultimately increase their sporting success.

In addition to this, utilization of the stadium capacity remains a key ingredient for a club's financial success. In order to examine the relationship between a club's reputation and stadium attendance Czarnitzki & Stadtman (2002) analyzed the teams in the German national league (Bundesliga). Through a Tobit Model they found that the reputation of the Bundesliga-clubs correlates with the stadium attendance.

The aforementioned articles illustrates that sports economists tend to agree that financial success is the primary driver for sporting success. The literature describes how a club's financial performance is reflected through both domestic and international sporting success. Strong brand name and a healthy reputation are also factors that are found to have a positive effect on revenues and ultimately sporting success.

2.1.2 Relationship between salaries and sporting performance

Through the years there have been a variety of studies illustrating how sporting performances are related to wage-costs.

After years of financial distress in the English top tier, Szymanski and Smith (1997) examined financial performance of clubs from the English league in the years 1974-89. By developing an empirical model and including a set variables like wage bill, league position, turnover and net transfer spend, they discovered a

high correlation between performance-level and wage-costs. This indicates a close relationship between inputs and outputs.

An article by Ferri, et al. from 2017 investigated the relationship between results from sporting performances and financial performances in the Italian football league, Serie A.

By performing an analysis with panel data from between 2007-2014 for the 29 clubs that played in the league during this period, the results showed a positive correlation between salaries and sporting performances. On the other hand, the transfer fees paid when buying new players were strongly negatively correlated with sporting results.

These findings are comparable with a similar study performed by Dimitropoulos and Limperopoulos (2014), who observed how the investment of player contracts in the Greek football league were related to performances by the football clubs. They argue that when football clubs invest heavily in player-contracts they automatically increase their success rate. Even though this indicates that salaries positively affects sporting performances, the same study concludes that such an investment in the players are unprofitable for the clubs, and thus implying that choices related to sporting success are considered more important than economic stability.

Another research performed by Fort and Quirk (1995) examine the major sport leagues (baseball and American football) in the US, and try to work out which salary-measures that would generate a stable economy and how performances in sports are affected by these salary-schemes. They argue that salary cap is the only cross-subsidization scheme that can secure financial vitality for teams located in weak-drawing markets, while at the same time improving competitive balance. But their study also shows that even though salary and performance are linked together, they are not necessarily positively correlated.

Hall, Szymanski, and Zimbalist (2002) came to the same conclusion when they found evidences of causality between performance and salary in American baseball from 1995-2000. Like Fort and Quirk they also found results of salary

having both positive and negative effects on performance. In addition, Hall et al. also compared their results to correlation between salary and performance in English football. They concluded that salary will have more positive effects on football, as baseball have restrictive policies when it comes to player spending, roster size and trading rights, which are absent in football. In other words, the possibility of buying success is higher in football.

2.2 Context part

In order to get a clear understanding of the different frameworks related to our paper we have included a context part. This section aims to illustrate the structure of the English Premier League, and how the broadcasting money is earned, distributed and invested. We also look at the broadcasting revenues generated by the other “big four” European leagues, and how their revenues and investments compare to the English league. As a large part of our paper is related to international sporting success we have also described the structure and economic frames of the two European club competitions, UEFA Champions League and UEFA Europa League. Conclusively we use the material of our context-part to derive our hypotheses.

2.2.1 Format and history of the English Premier League

The Premier League is the top tier of England's football pyramid, with 20 clubs fighting for the honor of being crowned English champions. Home to some of the most famous players, managers, clubs and stadiums in world football, the Premier League has grown to be the most watched league on the planet, with 900 million homes watching the action across 190 countries (Premier League, 2017). So how did it all start?

In May 1992 the English First Division changed its structure and the Premier League was formed, with the first campaign starting on 15.august the same year. In the opening season of 1992/93, 22 teams participated in the competition, with Manchester United being the first Premier League winner, finishing 10 points clear of Aston Villa. The league has since been reduced to 20 teams, with each club facing their opponents twice a season, one match home and the other one away, equaling 38 matches during the course of the competition.

Three points are awarded for a win, while one and zero points are handed out for draws and losses, respectively. The team wrapping up the most points by the end of the season wins the league, while the teams that finish in the bottom three of the table are relegated and replaced by three teams promoted from the Championship, the second tier of English football.

If any teams were to finish with the same amount of points, their position in the Premier League table is determined by goal difference (the difference between goals scored and goals conceded), then by the number of goals scored. If the teams still cannot be separated, they will be awarded the same position in the table (Premier League, 2017).

From the 2001/02 season, the teams that finish in the top three of the Premier League automatically qualify for the next season's UEFA Champions League group stages, while the fourth-placed team enters into the UEFA Champions League qualifying round. A fifth-place Premier League finish awards the team a place in the UEFA Europa League group stages.

The winners of the domestic FA-cup and League Cup will also enter the UEFA Europa League qualification rounds. If the winners and runner-ups of these domestic cups are already qualified for Champions League or Europa League through their league position (finishing the Premier League in first to fifth place), the places will go to the sixth and seventh placed teams in the Premier League.

A total of 49 clubs have participated since the Premier League format originated, with only Manchester United, Manchester City, Chelsea, Arsenal, Blackburn Rovers and Leicester City being able to win the coveted title. Manchester United have enjoyed most success, picking up 13 Premier League trophies in 25 seasons so far.

The same team holds the record for biggest winning margin, when they finished 18 points ahead of second-placed Arsenal in the 1999/00-season. The narrowest winning margin of +8 goal difference came in 2011/12. Manchester City snatched the title from Manchester United, scoring deep into stoppage-time to secure the title on the final day of the season (Premier League, 2017).

Arsenal is the only side to have gone an entire Premier League campaign unbeaten. The record was set in the 2003/04-season and the team was fittingly dubbed “The Invincibles” for their accomplishment (Premier League, 2017).

The most unlikely Premier League champion were crowned in 2015/16, with Leicester City capping off an incredible sporting story by winning the sought-after trophy. The incredible title triumph came just one season after the club miraculously avoided relegation by only six points. The 2017/18-season symbols the 26th edition of the competition, with Chelsea as the defending champions having recorded a Premier League-record 30 wins (out of a possible 38) on their way to title success in 2016/17.

2.2.2 Premier League and broadcasting money

The 2016/17-season marked the first season under the new three-year record-breaking television deal that made Premier League the most lucrative domestic football league in the world. Broadcasters Sky Sports and BT Sports currently share the TV-rights for Premier League in the United Kingdom after a staggering £ 5.1bn deal (previous broadcasting cycle from 2013-16 was £ 3bn) was agreed during the 2015/16-season (Statista, 2017). The Premier League also signed massive overseas TV-deals, which takes the total broadcasting income to approximately £ 8.5bn over the course of the next three years (£ 2.8bn per season). So how is the TV-money distributed between the 20 clubs in the Premier League?

While the overseas money is divided equally between all 20 teams, the domestic portion of the money is divided amongst the clubs according to the following model:

- 50% divided equally between all 20 clubs
- 25% is merit based, meaning that they are distributed according to final league position.
- 25% is distributed as facility fee to all clubs depending on how many times they are shown on TV. Each club is guaranteed a minimum of around £ 13.6m, with an additional 940.000 £ per televised match (The Mirror, 2017).

2.2.3 Broadcasting money and financial revenue

With the new broadcasting deal taking effect from the 2016/17-season, the Premier League continues to power ahead of the other four dominant European Leagues in terms of total revenue generation. The new three-year television-contract has resulted in an average increase of 45% in broadcasting revenues compared to 2015/16, with the Premier League expected to bank a total of approximately € 5bn in total revenue in 2017/18 (Deloitte, 2017).

The collective selling of broadcasting rights, and the associated relative equality in distribution, has been an essential strength of the Premier League over the past 25 seasons. The league's broadcasting revenue distribution mechanism (described above) - the most uniform of the European "big five" leagues enables an intense competitiveness in the league, exemplified by the shock of Leicester City's Premier League win in 2015/16 (Deloitte, 2017).

"In no other major footballing nation could a club with a similar profile to Leicester City be able to obtain approximately 90 million pounds in broadcast revenue alone, to help give such an "outsider" a shot at glory, without reckless overspending" (Deloitte, 2017).

2.2.4 Broadcasting money, transfers and wages

Whilst the Premier League clubs have remained ahead of their European counterparts in terms of revenue generation off the pitch, the 2015/16-season also confirmed their attempts to enhance their on-pitch position. Boosted by the knowledge of significant guaranteed revenue increases in the 2016/17-season due to the record-breaking TV-deal, English clubs remained by far the largest actor in the transfer market. Premier League clubs spent a record £ 1.3bn on transfers during the 2015/16-season, surpassing the previous record of £ 1.1bn by more than 20%. Twelve clubs spent more than £ 50m (up from seven clubs in the 2014/15-season), with Manchester City breaking the record for a Premier League club in a single season when they splashed out £ 175m for their new player acquisitions (Deloitte, 2017).

As Premier League transfer spending has continued, so has the growth of wage-costs. The 20 clubs reported a total wage bill of £ 2.3bn in the 2015/16-season,

more than double the total spent by the clubs in any of the other “big five” leagues. The Premier League wage costs increased by 12% compared to the previous season as the English clubs spent money in anticipation of the enhanced broadcasting revenue obtained in 2016/17 (Deloitte, 2017).

2.2.5 The European “big four” leagues and broadcasting revenues

New European broadcasting deals taking effect in recent years continue to have a profound effect on the financial landscape of the Europe's “big five” leagues. Having already discussed the impact of the TV-deals in the Premier League, this paragraph will shed a light on similar broadcasting arrangements in the other “big four” European leagues, and see how it affects their revenues.

Bundesliga – the top tier in Germany

A new four-year, synchronized domestic and international, broadcasting deal are expected to result in the Bundesliga clubs combined revenues surpassing € 3bn in 2017/18. The total annual value of broadcasting rights in Germany for the two top divisions combined, is likely to rise to beyond € 1.4bn over the duration of the new broadcasting cycle. This is an increase of 75%, compared to 2015/16 levels (Deloitte, 2017)

La Liga – the top tier in Spain

After a transitional year in 2015/16, the Spanish clubs fully adopted their new collective television rights selling mechanism in 2016/17, collecting a total of € 1.2bn in broadcasting revenues. According to Deloitte (2017), the new arrangement is expected to take the total La Liga revenues beyond € 2.8bn, which will see them briefly eclipse the Bundesliga as Europe's second highest revenue-generating league in 2016/17. Combined with improved financial transparency and responsibility, the clubs should be able to sustain their improvements in profitability over the coming seasons.

Serie A – the top tier in Italy

The Italian clubs revenues are unlikely to grow significantly over the next few seasons with Seria A’s existing broadcasting rights tied down to a cycle ending in 2020/21. The current deal with Infront Sports & Media is worth € 990m per

season, and any further growth in revenue will be dependent on the clubs improving their commercial deals and/or increasing their match day attendances (Deloitte, 2017). As a result of this, the Italian clubs will face a difficult challenge competing, in financial terms, with their European colleagues to attract the best playing talent over the coming seasons.

Ligue 1 – the top tier in France

Deloitte (2017) expects the French league to remain the lowest revenue-generating of Europe's "big five" leagues throughout the 2016/17- and 2017/18-seasons. This is despite the entrance of new domestic broadcasting rights deals in 2016/17 worth around € 130m more than the previous broadcasting cycle of € 665m.

2.2.6 Other revenues

As seen above, the financial performance of the "big five" European leagues in 2015/16 was heavily influenced by growth in broadcasting revenues. In Appendix 1 we see that the other primary elements contributing to the leagues revenues are: revenues from match-day (attendance), sponsorship/commercial- and other commercial activities.

We observe that the German clubs continue their traditionally strong commercial performance, generating total sponsorship and other commercial revenue of approximately € 1.3bn, 47% of total revenue, and second only to the English Premier League clubs that generated slightly below € 1.5bn (Deloitte, 2017). Furthermore, we notice that revenues from match-day are relatively similar in Germany (€ 528m) and Spain (€ 500m). Collecting around € 500m each, the leagues receive remarkably more from their attendance than the Italian (€ 204m) and French (€ 164m) leagues, but notably less than the English league do (€ 831m).

2.2.7 How are revenues invested to achieve sporting success?

A huge bulk of the revenues is used to acquire footballs premium talent. In a record-breaking 2015/16 transfer window, almost € 3bn were spent on new player acquisitions across Europe's top five leagues (Sky Sports, 2015). That is a

staggering 31% growth compared to the previous summer's figures, which was the previous record-holding year.

"We keep talking about the record highs and we've seen a record high in all top leagues" former Barcelona Marketing Executive in Barcelona Football Club, Esteve Caldaza states (Sky Sports, 2015). He further proclaims, *"There is a clear dominance from the Premier League, which is getting fantastic TV-rights income, that flows into the game"*.

As Appendix 2 illustrates, the Premier League clubs net spend (player acquisitions - player sales) were in fact more than five times bigger than the La Liga and Serie A clubs expenditures, with experts predicting the trend to persist in the future (Sky Sports, 2015).

Another huge financial item is the clubs wage costs. Appendix 3 from Deloitte shows the "big five" European league clubs' revenues and wage costs for the 2014/15 and the 2015/16-seasons. While the Premier League clubs wage bill increased to € 3bn, more than double that of any of the other "big five" European leagues, the clubs in La Liga overtook those in Serie A to become the second highest wage spenders in the 2015/16 season. The Spanish sides boosted their wages by almost € 200m, as more clubs were able to increase their wage level in line with the above-mentioned upswing in La Liga' broadcasting rights.

Bundesliga clubs experienced a wage increase of € 95m in 2015/16, matching the wage level of the Serie A, and becoming the joint third-highest wage spenders in Europe. However, the German clubs recorded a significantly lower wages/revenue-ratio (49%) than their Italian competitors (70%). This is only the third time in the last decade that one of Europe's "big five" leagues has recorded a wages/revenue-ratio lower than 50%. In fact, the Bundesliga achieved the feat on the two previous occasions as well (Deloitte 2017).

The Italian clubs experienced the lowest growth in wages with an increase of only 3% in the 2015/16-season. This modest growth, combined with an increase of 7% in total revenue, saw the wage/revenue-ratio decrease from 72% to 70%.

Nevertheless, this was still the highest ratio of the "big five" European leagues (Deloitte, 2017).

The French Ligue 1 wage costs surpassed the € 1bn mark for the first time, as the clubs experienced a 7% increase in the 2015/16-season. The wage/revenue-ratio grew by 2% as the wage-cost growth outpaced the increase in revenues. Paris Saint-Germain's wage bill increased by 15% to 292 million euros, representing roughly 30% of the French league's wage expenditure (Deloitte, 2017).

2.2.8 International club competitions

A good indicator of European clubs sporting success is their performances in the UEFA Champions League and UEFA Europa League. While the previous paragraphs touches upon the revenue-effects of domestic broadcasting deals, the economic rewards of success in international club competitions have surpassed the prize-money from domestic competitions. Szymanski emphasizes this by stating that; "there is no doubt that the big clubs view success in the Champions League as their primary objective" (Rohde & Breuer, 2016).

2.2.9 UEFA Champions League

The UEFA Champions league is the most prestigious international competition for European football clubs, with the winning team to be reckoned as the best team in Europe the current year.

It started as the European cup in 1955/56 with 16 participating teams, but was renamed the Champions league in 1992. The competition has also expanded and become a tournament including at most 79 teams in the qualifying rounds. (UEFA, 2017)

These rounds consist of three elimination matches before a final play-off match decides whether a team is able to qualify for the group stages.

In the group stage the thirty-two qualified teams are drawn together in eight groups of four based on their European ranking (previous international merits) (Thoughtco, 2017). The four teams play against each other twice, both home and away. A victory gives three points, a draw gives one, while a loss gives zero. The two teams with most points from each group after six matches moves through to the eliminating knockout rounds. The team with the third highest number of points in the group is immediately moved into the first round of the knockout stages in the Europa League.

The rounds start with a round of 16, then quarterfinals, before the four remaining teams are drawn into two semi-finals. The two winners from the semi-finals meet in a final, which crowns the winner of the tournament.

UEFA have enabled a coefficient system in order to decide how many clubs from each country qualify for the tournament. This system is designed as a ranking of the countries, where previous results by the teams from these countries in international tournaments are calculated through a specific point system, over the previous five years. These points are divided by the number of teams represented by each country in order to estimate the coefficient.

Appendix 4 describes how teams qualify for the Champions League, through the coefficient system.

2.2.10 UEFA Champions League finances

The total revenue from the UEFA Champions League distributed to participating clubs is approximately € 1.3bn.

By competing in the tournament a club can earn up to € 57,2m through both guaranteed fixed payments and variable payments based on results.

In the qualification rounds each club are receiving a participation-revenue if they are eliminated before the group stages, as well as a solidarity payment of € 260 000. The participation revenue are based on which round they are potentially eliminated from, with € 220 000 from the first round, € 320 000 from the second, and € 420 000 from the third. If a club is eliminated from the play-offs they receive the sum of the participation revenue equal to the two first rounds, in addition to the solidarity payment.

Clubs qualified for the group stages of the tournament receive a guaranteed fixed payment of € 12.7m during this phase. They also have the possibility of additional result-based payments of € 1,5m per win, or € 500 000 per draw.

By progressing to the round of 16 the guaranteed fixed payment increase by additional € 6m, quarter finalists receive € 6,5m and by competing in the semi-finals the clubs receive € 7,5m each (UEFA, 2017).

The finalists in the UEFA Champions League share € 26,5m, with € 15,5m for the winner, and € 11m for the runner up, respectively.

In addition to what a club can make in fixed and variable revenue by progressing in the UEFA Champions League, UEFA also distribute € 507m in market pool payments. These payments are regulated by size and value of the television markets in each country participating. When the value is defined, all clubs from the particular country share this market pool based on a set of conditions including the number of competing clubs from this country, how the clubs performed domestically the previous year, and their performance in the upcoming tournament (UEFA, 2017).

2.2.11 UEFA Europa League

UEFA Europa League is the second most prestigious tournament in Europe every year, with 55 countries and 190 teams participating.

The tournament was established in 1971, and was named the UEFA Cup. From the season 2009/2010 it was renamed Europa League after UEFA agreed on a rebranding of the competition (UEFA, 2008).

Europa League has the same structure as the Champions League, with three qualification rounds and a play off match in order to qualify for the group stage of the competition.

This tournament is on the other hand slightly larger than Champions League and 48 teams are participating in the group stages divided into twelve groups of four teams. After both home and away matches against all teams in the group, the two best teams progress into the eliminating knockout stages.

In this stage, the 24 progressing clubs are joined by the 8 teams finishing third in their respective Champions League groups, giving a knockout-phase of 32 clubs. Here two and two clubs are drawn together and play home and away matches in order to eliminate each other, based on results.

This structure continues through both the round of 16, quarterfinals and semi-finals, until two teams meet each other in one final match, which determines the winner of the tournament (Wikipedia, 2017).

In order to define which teams are allowed to participate in the Europa League, UEFA use the same coefficient ranking as in Champions League.

The number of teams participating from each country through the coefficient system can be found in appendix 5.

2.2.12 UEFA Europa League finances

The total revenue from the UEFA Europa League distributed to participating clubs is approximately € 400m.

This revenue will be allocated the same way as UEFA did in the Champions League with € 239.8m in fixed payments, while € 160m are distributed in market pool payments.

During the qualification rounds, the participating clubs holds the right to a respective payment for each round. In the first round the payment is € 215 000, € 225 000 in the second, € 235 000 in the third, while it is € 245 000 in the play-offs. Unlike the Champions Leagues qualification, there are no additional solidarity payments during this stage, and if a club wins their respective play-off match, it is not entitled to the payment from this qualification match either.

In the group stage of the competition the clubs receive a guaranteed fixed payment of € 2,6m, and a variable performance payment of € 360 000 per win and € 120 000 per draw. Additionally, group winners receives a bonus of € 600 000, while € 300 000 are handed to the second placed team in the group.

When the clubs enter the knockout stages, they each receive € 500 000 for the round of 32, € 750 000 in the round of 16, and € 1m in the quarterfinals. Those four clubs that reaches the semi-finals are entitled to € 1,6m for this.

The Europa League finalists are sharing € 10m, € 6.5m for the winner and € 3.5m for the runners-up. The winning team are also collecting almost € 13m as they are automatically qualified for the group stage of next years Champions League.

Adding all participation and bonus revenues above, a club could potentially earn € 15.17m through the competition, before the market pool is divided.

The market pool in Europa League has the same structure as in the Champions League, described earlier in this paper.

As mentioned, the enormous payouts and result-oriented bonuses from UEFA competitions enable clubs to generate direct revenues through participation and success in the competition. In addition to this, the opportunity to acquire new international sponsors and fans could create a growth in indirect revenues (Rohde & Breuer, 2016)

3.0 Hypotheses

Based on our context-part we have derived the following two hypotheses:

- Hypothesis 1: *International sporting success for English Premier League clubs is positively impacted by an increase in broadcasting revenues.*

International sporting success is the dependent variable, while broadcasting revenues are independent.

- Hypothesis 2: *International sporting success is positively impacted by an increase in salary-costs.*

International sporting success is the dependent variable, while salary-costs are independent.

3.1 Potential variables for hypothesis 1

In their study from 2016, Rohde & Breuer aimed to prove that financial success (revenue) of Europe's elite football clubs was correlated by domestic – and international sporting success, as well as commercial success (brand value). In order to test this relationship they based their research on a balanced panel of the top 30 European football clubs by revenues. The data was gathered over a period of ten consecutive seasons from 2003/04 to 2012/13, creating a sample of n=300 club-year-observations. The researchers argue that profits or revenues may measure financial success, and since European football clubs regularly are viewed to be win-maximizers, they measure financial success as revenues excluding transfer fees (**REV**).

National sporting success is defined through the variable “league points per game” (**LPPG**). They have also accounted for domestic cup success through a dummy

variable for cup wins (**CUPWIN**). International sporting success is measured as UEFA coefficients excluding the country coefficient (**UCEC**) to account for club-specific performance in the UEFA Champions League and UEFA Europa League. European clubs not competing the UEFA tournaments was assigned a missing value rather than a coefficient of “0” to generate consistent estimates.

In order to test our first hypothesis we are going to use some of the above-mentioned variables. By additionally adding an independent variable of broadcasting revenues (**BRDCAST**), we will establish a regression model to see if we can obtain significant results indicating that there is a correlation between the increase in Premier League broadcasting revenues and English clubs international sporting success.

3.2 Potential variables for hypothesis 2

Ferri et al. performed a research in 2017 regarding the relationship between the financial- and sports performances in the Italian football league. The study consisted of performances and results of 29 Italian clubs from seasons 2007/2008 to 2013-2014. Among their results, they observed positive effects between expenses related to salaries and how the clubs performed. In order to come up with these results they did an empirical analysis based on 129 observations and several variables both related to economic and sporting aspects. The dependent variable was (**PT**), which is obtained number of points scored by each team in every season, divided by maximum number of points. Among the independent variables were (**ROI**) showing return on investment estimated by dividing EBIT over total assets, (**Salary**) which is total salary of football players, (**Investment**) indicating a difference between earnings on player-transfers and total acquisition cost of new players, and (**AFOLL**) which is the mean of the number of followers in the stadiums every year. They have also included (**FCFO**), showing value of operating cash flow as reported in the cash flow statement, and (**LEV**) which is obtained by dividing total debt by equity.

These are all variables we find relevant in regards to our second hypothesis, but we also want to include (**BRDCAST**), a Dummy variable on whether a club is affected by increased broadcasting revenues (1) or not (0), and use (**PTINT**) as our dependent variable, explaining the number of points a club obtain in the European tournaments, divided by maximum number of points obtainable.

We will solve this by establishing a regression model the same way as in *hypothesis 1*, testing whether increased salary-costs are having a positive impact on international sporting success.

4.0 Collection of data and data-accessibility

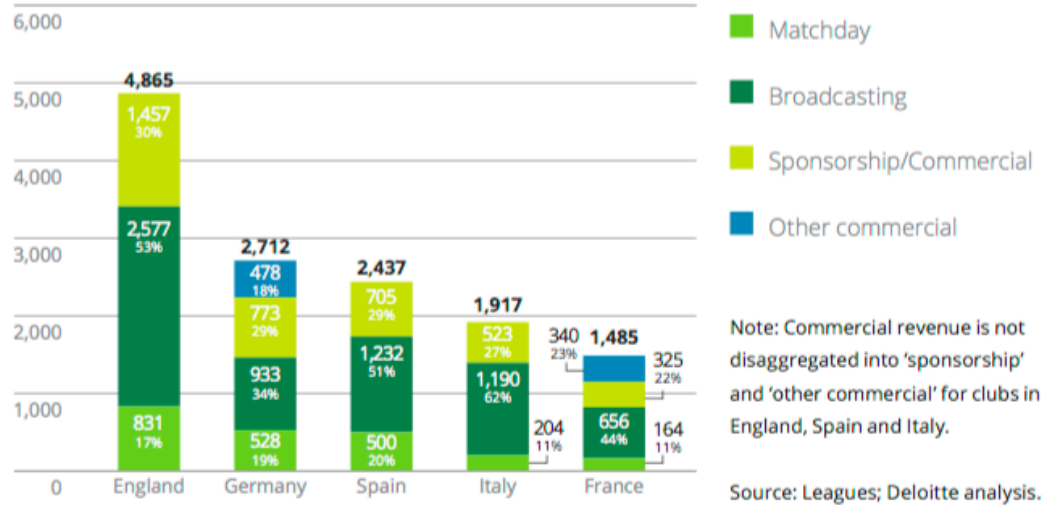
In order to perform our research and correspondingly answer our hypotheses, we have to collect input and structure it, so that we can get reasonable output. We will base our data's on studies that have explained similar research questions, content and correlations as we are going to investigate. Additionally we intend to find international sporting results from European tournaments, both before and after the new broadcasting deal took effect. We will also see how the English broadcasting deals have developed through the years, compared to the TV-deals subject to their European counterparts. We will collect historical data related to the clubs revenues and investment-levels (player acquisitions and wage costs) and see if we can find any trends indicating a correlation between these levels and revenues generated from the broadcasting deals.

In order to make a viable comparison between the English teams and their European competitors, we would need to get access to the clubs financial data. This is something we consider to be a possible challenge, as European football clubs follow the accounting rules of their associated countries, and are not necessarily committed make their annual reports known as public information. Another potential challenge is the accessibility of historical salary- and transfer information, which we need in our regression model in order test our hypotheses.

5.0 Appendices

Appendix 1:

Chart 2: 'Big five' European league clubs' revenues - 2015/16 (€m)

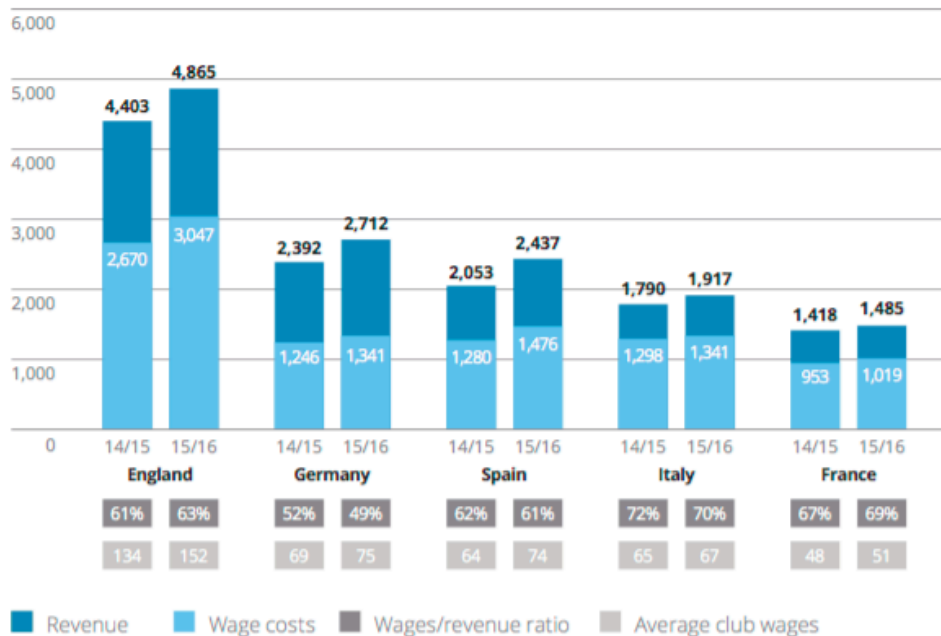


Appendix 2:



Appendix 3:

Chart 4: 'Big five' European league clubs' revenues and wage costs – 2014/15 and 2015/16 (€m)



Source: Leagues; Deloitte analysis.

Appendix 4:

Coefficient ranking	Automatic entry	Qualifying rounds	Total number of teams included in CL
1-3	3	1	4 = 12
4-6	2	1	3 = 9
7-12	1	1	2 = 12
13-15		2	2 = 6
16-55		1	1 = 39
Total			78
Qualified by winning Europa league			1
Total			79

 Appendix 5:

Coefficient ranking	Qualified teams	From Champions league	Total number of teams included in EL
1-31	3		93
33-51	3		57
52-54	2		6
32 and 55	1		2
From CL third round qual.		15	15
From CL play off rounds		10	10
From CL group stage (third place)		8	8
Team from country with previous years winner	-1		
Total			190

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