



Honors College Theses

4-18-2023

The Introduction of Financial Fair Play Regulations in European Football and its Effect on the Success of Clubs

Thomas Jackson
Georgia Southern University

Follow this and additional works at: <https://digitalcommons.georgiasouthern.edu/honors-theses>



Part of the [Corporate Finance Commons](#)

Recommended Citation

Jackson, Thomas, "The Introduction of Financial Fair Play Regulations in European Football and its Effect on the Success of Clubs" (2023). *Honors College Theses*. 852.

<https://digitalcommons.georgiasouthern.edu/honors-theses/852>

This thesis (open access) is brought to you for free and open access by Digital Commons@Georgia Southern. It has been accepted for inclusion in Honors College Theses by an authorized administrator of Digital Commons@Georgia Southern. For more information, please contact digitalcommons@georgiasouthern.edu.

The Introduction of Financial Fair Play Regulations in European Football and its Effect on the Success of Clubs

An Honors Thesis submitted in partial fulfillment of the requirements for Honors in the
Department of Economics.

By
Thomas Jackson

Under the mentorship of *Dr. Jeffrey Schiman*

ABSTRACT

This study explores the effects that Financial Fair Play (FFP) regulations introduced by the Union of European Football Associations (UEFA) in the 2011-12 season have on the success of football teams within the league. The rationale of FFP was to make the league more competitive by restricting a team's ability to spend on player salaries. Through the construction of a comprehensive longitudinal dataset, I analyzed team performance from the 2004-05 season through to the 2020-21 season, measuring club success in points-per-game, wins, losses, and draws and financial success using team profit margin and salary expenditures. Using difference-in-differences approaches, I find that the effectiveness of FFP regulations was limited for the largest salary teams prior to the regulation. Amongst the smallest salary teams, I find some evidence of improvements in terms of points-per-game and wins along with reductions in losses; these gains were concentrated in the years immediately following the regulation. Interestingly, I find that the largest salary teams prior to FFP spent even more in the period following FFP, opposite of the intention of the regulations. The effectiveness of FFP regulations seems highly debatable based on the findings of my study.

Thesis Mentor: _____

Dr. Jeffrey Schiman

Honors Director: _____

Dr. Steven Engel

April 2023
Department of Economics
Honors College

Georgia Southern University

Acknowledgments

I would like to express my sincere gratitude to Dr. Jeffrey Schiman for his invaluable support and guidance throughout the course of this research project. His unwavering support and encouragement combined with his expertise has been instrumental in shaping the direction and outcome of my work.

I. Introduction

Implemented during the 2011-12 European football season, the Union of European Football Associations (UEFA) introduced Financial Fair Play (FFP) regulations that aimed to stimulate competitiveness within European football leagues by achieving a greater level of financial and economic equality and stability across teams. They aimed to achieve this through the implementation of a set of rules that clubs had to abide by to ensure their eligibility to operate within European football. The most significant rule implemented was the ‘break-even rule’, which required that “clubs cannot spend more than their income derived from football activities, and equity investment from rich benefactors cannot be counted as part of the club’s income” (Serby, 2016, p.43). This newly introduced rule had the potential to dictate the success levels of many European teams going forward by preventing excessive spending in the hope that competition would become more equally balanced. Teams that did not abide by the rules implemented in 2011-12 could face a range of sanctions including transfer bans, points deductions, and sizeable fines.

However, the success of FFP regulations has been highly scrutinized. In contrast to UEFA’s intentions when they implemented the rules, several studies found that following the introduction of FFP regulations, the level of competition decreased throughout European football leading to a greater disparity between the ‘best’ and ‘worst’ performing teams. One of the key findings in numerous studies that I will discuss in my literature review is that league hierarchies were found to be frozen with the introduction of FFP regulations, leading to a decrease in the competition level and broadening the gap between the best and worst performing teams in the pre-FFP period.

Football is a popular sport worldwide, with 240 million people playing the sport ‘regularly’ (FIFA, 2001) and many millions of people reaping the benefits of the sport both physically and financially. Active participants remain fit and healthy and in doing so increase life expectancy and improve their quality of life, and those who do not play often benefit from the money that football brings into the local economy through club revenues and club initiatives within communities, with clubs often improving infrastructure and sporting facilities in the areas (Pfeifer, Wahl, Marczak, 2018, p.887). “In the 2018/19 season, the total revenue the European professional soccer market was estimated at 28.9 billion euros” (Lange, 2020). This financial success is a catalyst for the success of other markets (TV and tourism) with four-year deals with major UK television networks (BT TV and Sky) worth £5.14 Billion (BBC, 2018). Given the large financial stakes within European football, teams spend considerable amounts of money in the hope of improving success and garnering a greater share of the market. Indeed, some teams have engaged in “financial doping” which occurs when large sums of money are injected into a club over a short time period directly from the team’s owner rather than relying upon revenues generated by the club. Such behavior has occurred in several large teams such as Manchester City, Paris Saint Germain, and Chelsea (Birkhäuser, Kaserer, Urban, 2019, p.8); all of which have had a rapid rise to sustained success.

In response to inequality in club resources and spending, UEFA implemented FFP regulations that aimed to stimulate competitiveness within the league by achieving a greater level of financial and economic equality across teams. The introduction of FFP regulations has the potential to affect the financial strength of European football teams by hindering the progression of certain financial powerhouse clubs while potentially creating a more level playing field across European football

leagues. Indeed, some teams that have dominated the sport for decades have recently been surpassed by smaller clubs that historically underperformed. Clubs such as Leicester City in the English Premier League experienced success winning the Premier League in the 2015-16 season. Whether these changes are the result of FFP regulations or merely coincided with the regulations is a focus of my study.

It is therefore clear to see the financial importance of the football industry across the globe. The progress and development of the sport lies largely in the hands of the governing bodies overseeing the regulation on the global stage. This study offers a unique insight into the effectiveness of the policies introduced, using the most recent data to determine whether the governing bodies' rules and regulations achieved what they set out to do. The results of the paper will help determine whether UEFA are implementing meaningful and effective regulations and will also help to determine the impact of placing constraints on the financial capabilities of teams in relation to their overall performance within the Premier League.

In this study, I estimate how FFP regulations affect the performance of teams regarding their achieved average points per game and individual wins, draws, and losses statistics as well as the financial profitability of teams. Using difference-in-differences approaches, I compare changes in performance between high and low-salary teams following FFP. I separate the league into terciles based on salary expenses in the year before FFP (2011 salaries). Teams that had higher salaries relative to their revenue prior to the implementation of FFP are hypothesized to be more affected by the regulations, since now they could only spend based on revenues generated by the club, and not based on money injected into the club through financial doping. The approach also allows me to explore the distributional effects of FFP by focusing on changes in performance amongst teams in the bottom and top thirds of the

pre-FFP salary expenditures. The validity of the research design relies on an assumption that in the absence of FFP regulations, the Premier League team analyzed would have followed similar trends regarding their PPG and financial measures in both the pre-and post-period analyzed.

While the rules set out to achieve long-term stability and create a more competitive league, my findings suggest that the effects of FFP were most pronounced in the year following the implementation and then diminished over time. My findings point to no changes in performance amongst the higher salary teams, but interestingly they spent a growing amount on salaries following FFP, opposite of the intention of the regulation. Amongst teams in the bottom tercile, I find evidence of improved performance in terms of PPG, wins, and losses. The improved performance is most pronounced in the years immediately following FFP and then diminishes with time. I find no evidence of changes in the financial performance of teams, regardless of salary tercile. The results of my study show how team performance measures have been affected by FFP regulations and in doing so, they provide a unique insight into the effectiveness of UEFA's methods of creating a more balanced and stable league system.

As described in the upcoming literature review, past research focused primarily on the early effects of FFP regulations and often only focused on one area of performance that the FFP regulations affected giving a brief and narrow-scoped explanation about the true observable effects of FFP regulations. Many studies have focused solely on whether the league has become more equilibrated from an overall standings viewpoint without giving the direct effects that FFP regulations has on specific performance determinants such as wins, losses, and salary expenses. In contrast, my study will focus on the short- and long-run effects of FFP looking not

only at performance measures but financial measures as well. This will provide a holistic view of the effects of FFP, and I will use the most recent data to support my findings.

II. Literature Review

Football is one of the most popular sports in the world based on the number of viewers, participants, media coverage, and spending. As such, several prior studies (as discussed below) have explored the consequences of FFP regulations or other regulations within the game.

II.a. Individual regulations within FFP

Ahtiainen and Jarva (2020) researched how FFP regulations affected the profitability of clubs within Europe, with a particular focus on the ‘break-even rule’ and how this helps to create a sustainable financial environment in Europe’s top leagues over the period of 2008-2016. They argue that although FFP regulations may appear to be successful in some respects, the extent of success depended heavily upon the geographical location of the club. They conclude that “country-specific analysis reveals that the estimated positive effect is significant only in Spain, while for England and Germany, we find weak evidence” (Ahtiainen and Jarva, 2020, p.16). This heavily contradicts UEFA’s goals when they first decided to implement the regulations. Their work contradicts my preconceived thoughts about FFP in two crucial ways. Firstly, I believe that FFP regulations have a positive overall impact, regardless of the geographical location that they are affecting. Secondly, I believe that the information that I gather will show a strong link between FFP regulation introduction and negative performance financially. This however is contrasted by the “weak evidence” (Ahtiainen and Jarva, 2020, p.16) refer to in their paper.

Peeters and Szymanski (2013) focus on the self-proclaimed “crisis” that European football faces due to the introduction of the FFP regulations. Similar to Lindholm (2010), Peeters and Szymanski (2013) research the salary aspect of FFP regulations, focusing on average payrolls and wage-to-turnover ratios and how the break-even ruling affects them. They conclude that although the break-even rule does offer a stable and effective way to manage spending across European football (a more positive and hopeful view of the rule compared to Ahtiainen and Jarva (2020)), the desired effect of increasing competition across leagues did not occur.

II.b. Disparity in competition

Birkhäuser, Kaserer and Urban (2019) compiled a data set of 305 individual teams from the 2004/05 to the 2014/15 season and they found that FFP regulations further heightened the disparity in competition across the leagues between smaller and larger clubs. Although the FFP regulations prevented wealthy investors from financial doping, the study shows that there are numerous unintended consequences of these regulations, and not all of them are aligned with UEFA’s original goals and ambitions. “After the introduction of the FFP regulation, the link between past success and future spending on new players became stronger. Thereby, FFP benefits already successful clubs and makes it more difficult for less successful teams to spend more money on new players to improve the squad, which, in turn, results in lower competition,” (Birkhäuser, Kaserer, Urban, 2019, p.28) threatening the long-term sustainability of the sport as a whole. Their findings agree on the common issue that “FFP tends to make European football leagues less equilibrated” (Birkhäuser, Kaserer, Urban, 2019, p.31). This source contrasts my hypothesis (H₂) of how FFP regulations have impacted competition levels. I hypothesize that the performance levels of teams within the Premier League became increasingly more equal after the

introduction of the FFP regulations. If this were to be the case then we would see the average PPG of teams within the league decreasing nearer to the 1 PPG mark. An average PPG measure of 1 would indicate a perfectly competitive league as it would indicate that there is a greater number of draws within the league suggesting the competition is greater post regulations. We have seen a greater level of variety in teams winning the Premier League since the introduction of the FFP regulations. Between 2004-2011 (the pre-regulatory period) there were only three different Premier League winners, all of which were or became huge globally renowned teams (Manchester United, Manchester City, and Chelsea). In the same time period post-regulation introduction, five different teams won the Premier League (Leicester City, Manchester United, Chelsea, Liverpool, and Manchester City) demonstrating the increased level of variance in winners but also highlighting the potential impact that FFP regulations had on the Premier League in determining its winner.

The findings of D'Andrea and Masciandaro (2016) are similar in many ways to the findings of Birkhäuser, Kaserer and Urban (2019) and so they too provide evidence that would disprove my hypothesis (H_2). They provide both arguments and counterarguments to common critiques of the FFP regulations using complex formulae and data manipulation to form graphs and tables to demonstrate their findings. They, like many scholars within this field, acknowledged that the areas of weakness in FFP regulations fell under three main categories; “i) FFP are likely to produce inefficiencies in markets for professional players; ii) they are likely to trigger unfair competition in football leagues; iii) they are likely to freeze existing football hierarchies” (D'Andrea, Masciandaro, 2016, p. 21). Using statistical analysis, they showed that many of these preconceived notions about FFP regulations do not hold. Using the work of Franck (2014), they recognize the alternative views on FFP stating

that the new regulations “represent a very ‘tolerant’ kind of competition restriction,” (D’Andrea, Masciandaro, 2016, p.13). However, their main conclusion comes after reviewing their data and combining it with pre-existing research. D’Andrea and Masciandaro concluded that, based on financial success indicators such as revenues and mean wages paired with the distribution of points within leagues, FFP makes it “increasingly difficult, if not impossible, for small teams to challenge the dominance of top clubs,” (D’Andrea, Masciandaro, 2016, p.14).

II.c. The free movement of players

Due to the nature of the regulations, there has been significant research conducted focusing on the effects that the regulations have on the movement and transfer of players. The break-even rule impacts the wage structure of teams as well as impacting the fees available to bring new talent to a club. Lindholm (2010) argues that FFP regulations are unlawful because they limit the free movement of labor due to the salary caps. Through comparisons with the success of the US sporting transfer system, Lindholm concludes that the FFP regulations do not comply with EU law and that “Financial Fair Play is an unusual salary cap in that it does not seek to increase competitive balance” (Lindholm, 2010, p.212) leaving the smaller teams across all European leagues with no real chance of reaching the performance levels of the top teams of each league.

The ideas developed by Lindholm (2010) are also backed by Franck’s (2014) earlier work. Franck (2014) studies how budget constraints imposed by FFP regulations affect the ability to acquire top talent. He makes links between the highly inelastic supply of talent and the “soft budget constraints and very low price-elasticity of demand for talent” (Franck, 2014, p.17) that leads to the excessive overpricing of top talent that cannot be funded without injections of cash from external investors.

Franck also links his work to the US model stating that “the benefit claimed for US salary caps, more even competition through uniform maximum payrolls, cannot be attributed to FFP,” (Franck, 2014, p.24).

III. Data

The data used in this study is compiled from several sources. First, when calculating each team’s average points per game (PPG), the data come from each year’s Premier League table. The PPG can then be calculated by dividing the number of points by the number of games (38). Points are awarded in the traditional format – three points for a win, one point for a draw, and no points for a loss. The highest average PPG will belong to the team that wins the league and the teams with the three lowest PPG will be the teams that are relegated from the division. Relating this to the hypotheses, a closely competed league would theoretically see a higher number of draws (as the teams are relatively equal in performance standards) whereas a league demonstrating competitive imbalances would have several teams scoring highly (towards the maximum 3.0 PPG average) and a number of teams underperforming (towards the 0.0 PPG average). Changes in PPG average over time can provide insight into the evolving competitive nature of the league. If the best-performing team’s PPG increases over time, this could indicate that the top teams are becoming even more dominant, while a decrease in PPG could indicate that the league is becoming more competitive. Similarly, an increase in PPG amongst lower-salary teams would also suggest improved competitiveness in the league. The Premier League has 20 teams in it at any given time but despite this, 40 teams have appeared in at least one Premier League season since the 2004/05 season. As the Premier League has a relegation system, the core 20 teams in the league in the first year of my

study differs greatly from the 20 teams remaining in the last year of my study. Only 7 of the initial 20 teams have remained in the league every year since. The PPG data has 340 individual readings representing the 20 readings per season.

The same method has been used to generate the data for individual team performance records. As detailed before, the dataset consists of 40 teams, all of whom have been in the Premier League at one point during the time period investigated. Individual yearly points tables were utilized to look at each team's number of wins, draws, and losses. These statistics were recorded every year regardless of the league that each team was in. FFP regulations have been implemented across all of the tiers in English football, albeit at varying levels. We could then control for differences across leagues within the regression analysis. While FFP regulations do not directly affect the performance levels of teams which would be reflected in their performance statistics (W/D/L), they did aim at levelling the playing field on a financial basis, limiting the amount that teams can spend and reducing the rate of debt accumulation (if any was present pre-FFP regulation). The performance statistics will help determine whether the FFP regulations levelled the playing field on a physical performance level in addition to a financial level.

The financial data used is sourced from the FAME database produced by Bureau Van Dijk. This database provides a comprehensive view of the studied Premier League team's financial performance allowing me to collect data on financial profitability measurements such as profit margin. This collected data will allow me to identify changes around the introduction of FFP. By comparing the profit margins of the Premier League teams before and after the implementation of FFP regulations, I will be able to identify the changes in financial performance driven by the new regulations. An observed increase in profit margin would suggest that the FFP

regulations have improved the financial success of the teams within the Premier League – a desired outcome for UEFA – making the league more stable and reducing the likelihood of clubs entering administration. Of the 40 teams included within the PPG dataset, 31 of them have their financial information public and available on the FAME database. The aim of FFP regulations was to ensure that the teams in the Premier League spent less than their revenues; in other words, they are making profit over a given period. As a result, I used the FAME dataset to collate information on two key pieces of financial information that are good indicators of a club's profitability. The first is the retained profit (not to be mistaken for retained earnings). Retained profit is the portion of the net income that is not paid out in dividends. For almost every single Premier League club, retained profit and net income can be used interchangeably because they are privately owned companies that do not pay dividends and so they are effectively equal. However, Manchester United are the only club that, up until fiscal year 2023, have paid dividends and so their retained profits represents the money that is available to be reinvested into the company. The profit margin and retained profit data points will be collected each year and compiled into a longitudinal data set consisting of 1116 total data points.

In order to be able to complete the necessary regression analysis, all the above data are combined into one comprehensive longitudinal dataset that tracks each team annually from the 2004-05 to 2020-2021 seasons. As the data recorded reflected every team that has appeared in the premier league at least once during the designated period, a dummy variable was created reflecting the specific leagues each team was in. The teams were assigned either the value 0,1,2 or 3 depending on the league that they were in during that assigned year. 0 represents the premier league, 1 is the Championship, 2 is League 1, and 3 is League 2.

Table 1 displays the descriptive statistics for the data set and the corresponding terciles. The first column indicates that the mean salary spent for all teams was £60.8M per given year. This is above the mean for both the bottom and middle terciles who have mean salary expenses of £30.6M and £33.3M respectively. However, the top tercile of 2011 salary expenses exhibit a mean salary expense of £118.1M, significantly above the means of the other two terciles. The PPG data points show clear differences between each of the terciles. Interestingly, as we move from the bottom to the middle salary tercile, the mean PPG decreases. Furthermore, the observed means for profit margins increases as you move up through the terciles. The bottom tercile has the lowest profit margin and the top tercile has the highest. However, the negative means in the profit margins reaffirms UEFA's belief that the teams within English football are operating inefficiently and are at risk of coming into financial hardship if the pattern continues.

IV. Empirical Approach

My first hypothesis (H_1) is the most general of the three hypotheses. I hypothesize that FFP has an overall general positive impact on the competitiveness of the league. In this context, the term 'positive impact,' can be interpreted in a way that means the league has become more competitive. I think that over time we will have seen a shift in the level of dominance from certain teams within the league and that there is now more of a 'level playing field' due to the FFP regulations limiting the spending of the largest teams to what their revenues equal – a regulation covered by the "break-even rule". Some of the most successful teams have been operating at huge losses each year to ensure they are able to bring in the best global talent. If FFP achieves what it set out to, this excessive spending will be reduced, the wage structure

of certain teams will be drastically altered, the number of transfers will be reduced, and the level of competition will increase. Wages in the football industry follow the same pattern as any other industry in the world. If you are the world's best player, you are expected to be paid the most amount of money. The break-even rule would therefore indirectly disperse the concentration of talent across a broader range of teams because no one team can afford to pay all the wages of the highest-performing players per position.

My second hypothesis (H_2) relates to the individual metric of PPG. I hypothesize that the introduction of FFP regulations has reduced the average PPG per team within the league. This will be done by the traditionally worse-performing teams gaining more points (in the form of draws) and the traditionally better-performing teams losing more points. A more competitive league would result in the average PPG being closer to the value 1 (the number of points allocated for a draw). By placing a limit on the amount of money that a club can spend, the free flow of players for extortionate fees becomes limited. Clubs cannot afford to keep buying players because their revenues must equal their expenses. While the teams traditionally nearer the bottom of the league have never been able to spend millions on the world's best talents, the ability of the best-performing clubs to buy whom they want, when they want has been (theoretically) severely impeded by the FFP regulations. With a lower flow of talent and reduced spending power, the league should become more competitive. If more teams are more competitive, the likelihood of a draw is increased which would drive the PPG value towards 1 and we would see significant decreases in the performance of the best-performing teams in the pre-FFP regulation period.

My final hypothesis (H_3) relates to the financial equality brought about by the FFP regulations. I hypothesize that financial fair play regulations have created a

greater sense of financial stability within the Premier League. This will be indicated by the profit margins of the teams becoming more positive. The rules implemented are to be followed by all clubs regardless of size. Clubs can no longer spend more than they earn or else there will be financial and points-based ramifications for any offending club. I think that this will limit the top teams spending excessively and, in many cases, this will turn their profit margins from a negative to a positive value. I think that this will therefore indirectly place a limit on the number of quality players within any single club due to wage structure issues and extraordinary transfer fees which in turn will lead to a slight deterioration in the physical performance of the team making the league more competitive.

To test these hypotheses, I will employ the difference in difference (DID) approach to estimate the causal effect of FFP regulations on PPG, wages, wins, losses, draws, and profit margins of teams. The DID approach is a quasi-experimental research design that allows us to determine the causal effect of FFP regulations on specific measurable outcomes by comparing outcomes for a treatment group (the bottom and top tercile of teams within the 2011 salary expenditure distribution) and a control group (the middle tercile), before and after the intervention.

To estimate the effects of FFP regulations on team performance, I will use the following DID specification:

$$Y_{it} = \alpha + YEAR_t + \theta_i + POST_FFP_t [\beta_l * SALARY_{LOW_i} + \beta_h * SALARY_{HIGH_i}] + X_{it} + \epsilon_{it}$$

where performance measures such as PPG, wins, losses, or draws or team finances for team i in year t (Y_{it}) is a function of year fixed effects ($YEAR_t$), team fixed effects (θ_i), the interaction between and indicator for the post-FFP period (i.e. 2012 onward) and indicators for whether the team was in the bottom or top tercile of the 2011 salary

expenditure distribution ($POST_FFP_t[\beta_l * SALARY_{LOW_i} + \beta_h * SALARY_HIGH_i]$), team controls (X_{it}) including indicators for which league the team is in, and a random error term (ϵ_{it}). The coefficients of interest are β_l and β_h , which represent the change in performance following FFP for the bottom (β_l) and top (β_h) tercile teams relative to teams in the middle tercile. An important assumption in event-study models is that in the absence of the intervention, both sets of teams would have followed similar trends to middle-tercile teams.

V. Results.

Table 2 demonstrates the short-term effects observed after the introduction of FFP regulation, with a clear focus on the performance and financial indicators previously mentioned. Short-term effects reflect outcomes generated within the first year after the introduction of FFP regulation. Here the results seem to be indicative of the success FFP regulation had on the Premier League demonstrating patterns of narrowing disparity in competition level between the highest and lowest terciles. The FFP regulations lead to a 0.2446 increase in PPG achieved by the lowest tercile which is significant at the 5% level. This is contrasted by the smaller increase of 0.0572 in PPG achieved by the highest tercile (traditionally the best-performing teams pre-FFP regulation), though this increase is statistically insignificant at conventional levels. In addition, the number of losses was reduced by 4.39 per season for bottom tercile teams, a notable decrease and significant at the 5% level. Furthermore, the number of wins was increased by 3.08 for bottom tercile teams in the first year that FFP regulation took effect which is a drastic increase especially when compared to the 0.45 increase exhibited in teams in the top tercile. Given UEFA's desire to level playing fields within the European leagues, the short-term effects on teams within the

Premier League indicate that the regulations had achieved what they set out to. The traditionally smaller teams found that they were now winning more and losing less which indicates an increase in competition levels within the league. I find no evidence of statistically significant changes in spending immediately following FFP.

Interestingly, my findings on the effect of profit margin in the immediate post period highlight that despite the introduction of FFP regulations (which implemented the break-even rule to reduce the losses teams were making in an attempt to prevent teams spending more than they earned), there was no significant change in the profit margin of teams regardless of tercile, suggesting that FFP was ineffective at achieving its primary goal in the short term.

Table 3 indicates the mid-term effects, which include four years following FFP or the period 2005 to 2015. While the observed trends from the first year of competition with FFP regulations seems to continue into the analyzed four-year post period, the magnitude of the effects appear to have decreased – potentially highlighting the inefficiencies of the regulations or the improved ability of teams to overcome the restricting nature of the regulations through alternative methods. Over the four years after FFP regulation introduction, the lowest tercile teams observed an increase of 0.1786 PPG which was significant at the 10% level while also experiencing 3.75 fewer losses, a significant decrease from the pre-FFP regulation environment. However, it is to be noted that over the longer four-year period, the effect that FFP regulation had on the teams within the lower tercile diminished in relation to the first year that FFP regulations were introduced. This perceived level of diminishing efficiency is highlighted further when looking into the salary component of the upper tercile teams. Over the four years after the introduction of FFP regulations, the teams within the upper tercile saw their salary expenses increase by

£15.5 million which is significant at the 5% level. While overall performance did not improve significantly (determined by the non-significant increases/decreases in PPG, wins, losses, and draws), the level of spending did increase notably. This increase suggests that the teams spending the most on salary before FFP were now spending even more to achieve the same performance-based outcomes. While salary is only one component of total club expenses, it is one of the main drivers of overall expenses with some teams paying individual players in excess of \$500,000 per week. The increased level of salary could potentially lead to the increased performance of players. As in many professions, the better the professional is at their job, the more they will be paid; this also holds true for football players. This significant increase in the level of salary spending may in the long run increase the overall disparity between the top and bottom teams, reverting to the tiered competition levels within the league. When viewing the mid-term effects on the profit margin, a similar pattern follows on from the outcomes observed in Table 2 (the short-term). There has been no significant change in the profit margin which again highlights the possible inefficiencies of the FFP regulation.

Finally, Table 4 looks at the long-term effects which are the observed effects of all the years post-FFP regulation, spanning 2005 to 2021. Table 4 highlights the potential weaknesses of the regulations in that the observed effects do not seem to be significant enough to alter the overall performance of teams and do not do enough to reduce the competition gap present before the introduction of the regulations. The lower tercile teams demonstrate an increase in the number of PPG achieved by 0.1824 which is significant at the 10% level but this is still drastically different to the 0.2466 difference exhibited in year 1. While there are some indications that performance has improved (losses decrease and wins increase), these data points are not statistically

significant and so we cannot say that there has been an overall improvement in performance levels driven by the introduction of FFP regulations. A similar pattern follows with the upper tercile clubs as well. In all of the short-, medium-, and long-term results, the performance level of the upper tercile clubs has not changed significantly suggesting that the FFP regulations failed to achieve what they were introduced for. Table 4 also highlights the unintended consequences of the introduction of the regulations as well. The upper tercile clubs (who before the regulations had the greatest salary-related expenses) demonstrated that after the implementation of FFP regulations, they spent on average £64.2 million more on salary expenses; a significant increase at the 1% level. While performance was not adversely affected, their salary expenses seemed to increase notably which strongly contrasts what we would expect to see. Given there are now financial constraints put on teams, we would expect to see a discontinuation in salary expense patterns yet, more specifically we would expect to see salary level decrease to align more with the break-even rule. The fact that teams in the upper tercile amplified their salary spending could indicate that the regulations only placed true constraints on the lower tercile teams which led to the overall performance of teams remaining relatively constant over the long term. Yet again, Table 4 highlights that the profit margins for both the upper and lower tercile teams show no significant change over the observed period.

The effectiveness of FFP regulations seems highly debatable based on the findings of my study. While the lower tercile teams did see improvements, these improvements were the greatest immediately after the implementation of the regulations – possibly as a positive ‘knee-jerk’ reaction to change within the somewhat stable and traditional football tier system. In the long run, these effects

begin to deteriorate and the pre-existing disparity in competition levels remains. The upper tercile teams (who spent more on salary expenses before the regulation in relation to other teams in the league) spent an increasingly larger sum of money on salaries after the FFP regulations were introduced, but this did not appear to yield an increase in positive performance.

VI. Discussion

The results highlight several important findings concerning the effectiveness of FFP regulations. The effects of FFP regulations diminish with time (observed in the gradually decreasing number of wins experienced by the lower tercile teams). This may be indicative of the ability of teams within the league to adjust and effectively overcome the constraints placed upon them by the regulation. This point is further emphasized by the fact that the teams in the upper tercile had no adverse performance outcomes as there was no significant change in the number of wins/draws/losses in the post period. Interestingly however, the teams in the upper tercile began to spend an increasingly larger amount on salary expenses which is one of the most unexpected outcomes given that salary is one of the largest components of club expenses per year. In many cases, an increase in salary expenses would have to be met with a proportionate increase in revenues to ensure teams still abide by the break-even rule.

While the results do not align with H_1 , they also do not appear to align with UEFA's intentions. It is difficult to definitively determine whether FFP regulations had a 'negative' impact on the Premier League, but the results highlight that there is a lack of overall change between the performance levels between the traditionally larger spending clubs and the traditionally lower spending clubs.

My results do align with H₂. While the effect on performance may not be as significant as UEFA and I had predicted, there is an observed increase in the performance of the lower tercile teams who traditionally spend less on salaries and were less successful in the pre-FFP period and the performance of the upper tercile teams remained consistent demonstrating no significant change from the pre-period. As the lower tercile teams improved and the upper tercile teams remained unchanged from the pre-period, there has been an observed increase in the competition level within the Premier League.

I also hypothesized that there would be a greater sense of financial stability within the league in the post-period. This does not seem to have been the case. Increasing profit margins would be indicative of a greater level of financial stability which is something that we do not observe in the results. We see no significant change in profit margins in either the upper tercile or lower tercile teams, raising questions about the true effectiveness of FFP regulations, more specifically the break-even rule.

The methodology and data used has one key limitation that merits discussion. This limitation was introduced during the process of data collection. While the FAME dataset had the relevant data for the majority of the Premier League teams of interest, there were also several teams missing financial information. This limitation is largely due to the fact that the companies being studied are privately held companies and so unlike publicly traded companies, there is no lawful requirement for them to release their financial statements to the public. This inevitably raises an issue in my research design because it is heavily dependent on teams releasing their financial information to the public. Although this did not cause an issue in my research project, the potential for future issues is significant as there may be large gaps left within the dataset.

There is also one key assumption that drives the validity of the results. We are assuming that the teams affected by the FFP regulations are abiding by the rules appropriately. This is heavily dependent on the honesty and integrity of the people running the teams within the Premier League. As there are such high stakes involved, ethics and honesty may be questionable. In fact, recent news highlights this issue perfectly. Manchester City, one of England's most successful teams in the modern Premier League era, have been found guilty of breaching FFP rules on over 100 occasions since 2009. Although the investigation is ongoing, the benefits of breaching the FFP regulations could have been so significant that the rapid rise to success was a direct result of said breaches. Although Manchester City are the only team in present-day media under scrutiny, there is no guarantee that they are the only team that has been breaching regulations. If over the years more teams are found guilty of similar breaches, the validity of my results becomes increasingly more uncertain.

Bibliography

- Birkhäuser, S., Kaserer, C. & Urban, D. Did UEFA's financial fair play harm competition in European football leagues?. *Rev Manag Sci* 13, 113–145 (2019).
<https://doi.org/10.1007/s11846-017-0246-z>
- D'Andrea, A., Masciandaro, D., (2016) Financial Fair Play in European Football: Economics and Political Economy - A Review Essay (January 2016). BAFFI CAREFIN Centre Research Paper No. 2016-15,
- FIFA.com. "Who We Are - News - FIFA Survey: Approximately 250 Million Footballers Worldwide." *Www.fifa.com*, 31 Apr. 2001.
- Franck, E.P., Financial Fair Play in European Club Football - What is it All About? (April 30, 2014). University of Zurich, Department of Business Administration, UZH Business Working Paper No. 328.
- Lange, D. (2020) "European Football Market Size 2006-2019." *Statista*, 26 Nov. 2020, www.statista.com/statistics/261223/european-soccer-market-total-revenue/.
- Lindholm, J. (2010). The Problem with Salary Caps Under European Union Law: The Case Against Financial Fair Play.
- Peeters, T., & Szymanski, S. (2013). Financial Fair Play and Financial Crisis in European football. *Centre for Economic Policy Research*, 1-50.
- Pfeifer, G., Wahl, F., & Marczak, M. (2018). Illuminating the world cup effect: night lights evidence from South Africa. *Journal of regional science*, 58(5), 887-920.

“Premier League TV Rights: Five of Seven Live Packages Sold for £4.464bn.” *BBC*

Sport, BBC, 13 Feb. 2018, www.bbc.com/sport/football/43002985

Ahtiainen, S., Jarva, H. (2020) Has UEFA’s financial fair play regulation increased football clubs’ profitability?, *European Sport Management Quarterly*.

Serby, T. The state of EU sports law: lessons from UEFA’s ‘Financial Fair Play’ regulations. *Int Sports Law J* 16, 37–51 (2016). <https://doi.org/10.1007/s40318-016-0091-2>

Table 1. Descriptive Statistics				
Variable	Overall	Bottom 2011 Salary Tercile	Middle 2011 Salary Tercile	Top 2011 Salary Tercile
<i>Salary (000's)</i>	60,764.85 [119,319.30]	30,570.77 [40,508.94]	33,348.22 [23,149.76]	118,133.90 [190,320.60]
<i>PPG</i>	1.43 [0.41]	1.39 [0.35]	1.32 [0.36]	1.63 [0.45]
<i>Win</i>	16.46 [6.13]	16.47 [6.01]	15.47 [6.08]	17.97 [6.35]
<i>Loss</i>	14.42 [5.40]	15.30 [5.00]	15.91 [4.91]	11.43 [5.43]
<i>Draw</i>	10.97 [3.55]	11.75 [3.52]	11.42 [3.41]	9.44 [3.23]
<i>Profit Margin (%)</i>	-13.30 [30.66]	-17.28 [32.29]	-14.35 [32.29]	-8.28 [25.74]

Notes: Each data point represents the respective mean. Standard deviations are in square brackets.

Table 2. Short-term effects of FFP						
Short Term Effects	PPG	Salary (000's)	Wins	Loss	Draw	Profit Margin (%)
<i>Bottom 2011 Salary Tercile*Post</i>	0.2466** (0.1056)	-3,169.21 (2,889.12)	3.08* (1.57)	-4.3900** (1.7637)	1.5715 (1.1195)	-6.88 (14.17)
<i>Top 2011 Salary Tercile*Post</i>	0.0572 (0.1246)	12,314.91 (8,466.53)	0.45 (1.76)	-1.3358 (1.6242)	1.1271 (1.0504)	-0.84 (13.69)

Notes: The leftmost column indicates the terciles of interest. Each of the columns represents estimates from separate outcomes of the DID regression. The regression controls for team and year fixed effects and includes salary tercile indicators and pre-and post-FFP regulation period indicators. All regressions also control for league indicators. Standard errors are in parentheses. The statistical significance of the pre- and post-FFP regulation differences are based on regressions with standard errors clustered by team. * $p \leq 0.10$ ** $p \leq 0.05$ *** $p \leq 0.01$

Table 3. Mid-term effects of FFP						
Mid Term Effects	PPG	Salary	Wins	Loss	Draw	Profit Margin
<i>Bottom 2011 Salary Tercile*Post</i>	0.1786* (0.1012)	-1,880.05 (3,836.81)	2.70 (1.63)	-3.75** (1.45)	0.11 (0.99)	-12.14 (10.43)
<i>Top 2011 Salary Tercile*Post</i>	0.0063 (0.1024)	15,516.13** (7,557.71)	1.06 (1.55)	-0.076 (1.34)	-0.42 (0.85)	-7.41 (10.98)
<i>Notes:</i> The leftmost column indicates the terciles of interest. Each of the columns represents estimates from separate outcomes of the DID regression. The regression controls for team and year fixed effects and includes salary tercile indicators and pre-and post-FFP regulation period indicators. All regressions also control for league indicators. Standard errors are in parentheses. The statistical significance of the pre- and post-FFP regulation differences are based on regressions with standard errors clustered by team. * $p \leq 0.10$ ** $p \leq 0.05$ *** $p \leq 0.01$						

Table 4. Long-term effects of FFP						
Long Term Effects	PPG	Salary	Wins	Loss	Draw	Profit Margin
<i>Bottom 2011 Salary Tercile*Post</i>	0.1824* (0.0939)	2,262.90 (5342.99)	1.39 (1.37)	-2.40 (1.47)	0.44 (0.73)	-17.13 (10.66)
<i>Top 2011 Salary Tercile*Post</i>	-0.0097 (0.1088)	64,158.50*** (22,041.79)	-.32 (1.47)	0.60 (1.34)	0.16 (0.85)	-14.74 (10.58)
<i>Notes:</i> The leftmost column indicates the terciles of interest. Each of the columns represents estimates from separate outcomes of the DID regression. The regression controls for team and year fixed effects and includes salary tercile indicators and pre-and post-FFP regulation period indicators. All regressions also control for league indicators. Standard errors are in parentheses. The statistical significance of the pre- and post-FFP regulation differences are based on regressions with standard errors clustered by team. * $p \leq 0.10$ ** $p \leq 0.05$ *** $p \leq 0.01$						