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Financial Regulation in Sport Championships as an Anticompetitive Institution

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Abstract: Financial regulation in sports is usually discussed in the context of representing an instrument against "financial doping". Notwithstanding the merits of this discussion, this paper takes the opposite perspective and analyses how market-internal financial regulation itself may anticompetitively influence sporting results. Virtually every regulative financial intervention distorts sporting competition to some extent and creates beneficiaries and losers. Sometimes, the actual winners and losers of financial regulation stand in line with the (legitimate) goals of the regulation like limiting financial imbalances or preventing distortive midseason insolvencies of teams. However, financial regulation may also display unintended side-effects like protecting hitherto successful teams from new challengers, cementing the competitive order, creating foreclosure and entry barriers, or serving vested interests of powerful parties. All of these effects may also be hidden agendas by those who are implementing and enforcing market-internal financial regulation or influencing it. This paper analyses various types of budget caps (including salary caps) with respect to potentially anticompetitive effects. UEFA's so-called Financial Fair Play Regulations and Formula One's recent budget cap are highlighted as examples. Furthermore, the paper discusses allocation schemes of common revenues (like from the collective sale of broadcasting rights) as another area of financial regulation with potentially anticompetitive effects. Eventually, the effects of standards for accounting, financial management, and auditing are discussed.

Keywords: sports economics, financial regulation, budget caps, salary caps, financial fair play, financial doping, collective sale of media rights, sports broadcasting rights, revenue sharing, formula one

JEL Classification: Z20, Z23, L40, L83, K21

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1. The Role of Financial Regulation in Professional Sports

Imbalanced financial means among competitors in a sports league or championship are an evergreen in sports economics as well as in sports policy (Schubert & Hamil 2018). The main concern is that financial imbalances lead to an uneven playing field where, from the outset, some competitors have better chances to win than others. The notion of a team *buying success* is often an unpopular one in sports, even in professional and commercial sports. It seems to violate values of integrity and fairness of sporting competitions. How can it be in line with the ideals of sporting competition if Paris St. Germain (PSG) with a budget of about € 520 million competes against FC Metz (with a budget of ca. € 45 million) in the premier football league of France? Actually, in 2023, PSG comfortably outspent Metz' overall season budget by buying one player, Randal Kolo Muani, for an estimated € 95 million. How can better talent play a role when Sebastian Vettel raced in an approximately € 380 million-budget Ferrari against Kevin Magnussen in a roughly € 115 million-budget Haas in pre-budget-cap Formula One? The underlying notion of the unfair character of such financial imbalances is well expressed in the recently popular term of *financial doping* (Gammelsæter & Senaux, 2011; Morrow, 2011; Könecke & Schubert, 2014; Schubert & Könecke, 2015; Schubert & Hamil, 2018).

On the other hand, financial imbalances are also a direct consequence of success in sports competition. Traditionally, a more successful team often directly earns a monetarily-valuable prize. More importantly, more success increases the probability of becoming popular with the fans (the consumers). This leads to more income from ticket sales and the sale of merchandise as well as from the sale of media rights like broadcasting. Furthermore, the attractiveness for sponsors increases, generating more income from this side as well. In other words, even if all teams of a league start with the same budget, differences in performance will lead to differences in budgets and financial means. How can it be fair, if these hard-earned financial advantages are taken away by regulation? Wouldn't that imply an unfair advantage for the worse performing teams, for the lesser talent?

In reality, however, there is no level-playing-field starting point in professional sports. One reason is that the "home" markets of teams differ: big-market teams (for instance, from a densely populated metropolitan area) may be able to extract bigger revenues even with equal performance than small-market teams (for instance, from a remote and rural area) (Quirk, 1973; Bird, 1982). Furthermore, there have always been 'external' financial injections – be it through wealthy fans, overly-generous sponsorships, eager local politicians, local companies, or other ways (see examples in Schubert & Hamil, 2018). Motives can differ a lot: sporting enthusiasm, local patriotism and loyalty, power over a famous toy, prestige and fame, reputation of individuals and brands, etc. The ability to acquire such 'external' financial injections may be independent of sporting success and talent to some degree and partly accidental. Moreover, the delineation of internal, 'earned', financial means and external, 'not earned', financial injections is blurry and ambiguous. A donation can be a fan enthusiastically desiring to help his club or a wealthy businessman looking for a new toy. Sponsorship money can be a sharp calculated advertising effort or motivated by local patriotism and loyalty – or even driven by empire building desires of managers. Taxpayer money can be injected to promote the local sports

culture and competitiveness as well as the local economy and tourism – or to please sports fans and influential locals in order to maximise votes at the next election. Why should one motive to invest money into sports be allowed and 'fair' and the other not? How shall one reliably discriminate between different motives for investment? Shouldn't this be done for motives of sports club members and buyers of sports club stocks as well?

Things get even more complex if the inherent dynamics are considered (*economies of sporting success*). Due to a self-reinforcing effect of success and revenue increases – more budget due to sporting success in t_1 may lead to higher winning probability in t_2 implying more revenues for t_3, etc. – the inherent imbalances from the sporting dynamics may be substantial. Even if all revenues are deserved through past sporting success, they still can lead to a situation where the now rich club can lie back and rely on its superior financial power to stay at the top – by just buying better player talent but without current superior management skills or talents. Ironically, poorer teams may now need an 'external', 'not earned', financial injection just to be able to compete with the rich team again – and be able to showcase current skills and talents. Would it be 'fair' to restrict the poorer team (or also generally small-market teams) in its ability to generate investment from outside the sport?

Notwithstanding, there is no systematic market failure in professional and commercial sports leagues (or other championship types) that would unconditionally require financial regulation. First, the connection between budget and success is neither immediate nor always prevalent. If there were no connection at all, the financial doping discussion would be irrelevant. However, it is an imperfect relationship: the highest budget does not always win. The recurring lack of success of VW-sponsored VfL Wolfsburg in the German Bundesliga or Toyota in Formula One (2002-2009) – in both cases despite having very high budgets – represent examples. Second, the connection between success and popularity (and thus between success and income) may be confused by external popularity factors pushing fan demand (local patriotism, same social class image, superstar effects, sympathy, tradition built upon distant past success, media coverage including social media, boulevard/gossip media presence, etc.; Budzinski & Pannicke, 2022). These factors may be less important in sports than in other entertainment industries, but they are still there. In European premier football leagues, between 41 (Spanish La Liga) and 64 (French Ligue 1) per cent of the revenues of the clubs come from sources like ticket sales, hospitality, merchandise, sponsoring and advertising, sale of players, and other commercial activities (English Premier League: 46 per cent; Deloitte, 2023). All these revenues are only imperfectly correlated with success and, regularly, clubs in lower positions (or even in lower leagues) earn more from these revenue categories than some of their higher placed competitors. This also illustrates that sports leagues neither represent fitting examples for Akerlof-type rat races, nor for strict positional competition (see Budzinski, 2014, 2017). Neither do revenues directly and inevitably depend on the ranking position, nor are there incentives to produce unproductive signals (signal jamming). Furthermore, the additional effort is not waste (as the rat-race effect would require it to be) and the "prize" (the revenues) the teams are competing for is very dynamically increasing – and not fixed (which is another condition for the rat-race effect to materialise). Actually, it requires a special type of financial regulation to create a position-dependency of some revenues – namely, in the context of the collectively received media revenues (see section 3).

Despite the absence of market failure, there may be economic reasons for financial regulation, like adverse incentives and moral hazard problems fuelled by bail-out expectations in the case of running insolvent if the teams/clubs are sufficiently prominent (*too prominent to fail*, Budzinski, 2014: 88-90; *soft budget constraints*, Andreff, 2007; Storm & Nielsen, 2012). From an economic perspective, this is particularly worrying if taxpayer money is used to bail-out badly managed clubs (zombie races; Franck, 2014). Often, however, financial regulation is motivated by fairness considerations or by the goal of making sporting competition closer (competitive balance considerations; see also section 3).

In sports markets, financial regulation typically takes the form of a market-internal institution, implemented and enforced by a market-internal regulator (see for more details Budzinski & Szymanski, 2015; Budzinski, 2019). This type of regulation is not government regulation. Instead, the market participants give themselves rules and create a body (some type of sports association, i.e. a body such as a regional, national, or international governing body for the sport) to govern those rules. While this is highly unusual for 'ordinary' textbook markets, it follows the fundamental sports economic logic that competitors in a sports market must cooperate on the rules of the game (Rottenberg, 1956; Neale, 1964). Naturally, once a market-internal regulator exists, it enjoys market power (the extent depending on the institutional structure; Budzinski & Szymanski, 2015) and may extend its governance beyond the necessary rules of the game and into commercial activities. Furthermore, principal-agent-problems may create room for the market-internal regulator to pursue other goals than the benefit of the (league or championship) participants or the sports in question (Budzinski & Feddersen, 2023). Consequently, real-world financial regulation may indeed be motivated by the desire to protect the integrity of the sport. However, it may also be motivated by underlying goals and agendas that serve partial interests of some stakeholders or the self-interest of the governing sports association.[1]

Altogether, the topic of financial imbalances and financial regulation in sports is a difficult one. Both financial imbalances and (enforced) financial balance may be viewed to be unfair and against the spirit of sports, as the discussion so far has demonstrated. In this chapter, the second view is in the core of the reasoning: *financial antidoping* may actually itself manipulate results and restrict competition.[2] The next section analyses various types of budget cap and their possible restrictive effects on competition, before the following section addresses an often-overlooked element of financial regulation, namely the distribution of common revenues and the re-distribution of competitors' income through market-internal regulation. Eventually, the closing section briefly discusses accounting standards as an instrument of financial regulation.

[1] Budzinski & Müller-Kock (2018) discuss an interesting case where financial regulation serves as a means to secure and exploit the market power of a sports promoter and to stabilise an anticompetitive cartel. This example represents an extreme case showcasing how manipulative to the sporting outcome financial regulation can be.

[2] For the first view, with a comprehensive literature review, see Schubert & Hamil (2018).

2. Budget Caps

2.1 Types of Budget Cap

Direct financial regulation takes the shape of various forms of budget cap. The concept of a cap is to define a maximum monetary ceiling, for instance, for a class of expenditure.

- A *global* budget cap covers all types of expenditures of a team or club, whereas a *partial* budget cap only limits spending in a specific class of expenditures (e.g. salary caps for players, transfer payment caps, or an engine development freeze as in some types of motor racing where the expenditures on improving the engine are capped).
- An *absolute* or *symmetric* cap limits all budgets to the same nominal amount, whereas a *relative* or *asymmetric* cap prescribes different maximum budget volumes to different teams/clubs.
- A *static* budget cap defines the maximum spending, whereas a *dynamic* cap limits the growth rate of the budget.
- Budget caps can also regulate income instead of expenditures. A *universal* cap limits a total income or revenue measure of a club/team, whereas a *discriminatory* cap only limits income or revenue from defined sources.

Obviously, different types can be combined. A general problem with all types of budget cap is evasive action by the regulated clubs or teams – either as creative exploitation of loopholes or as outright illegal conduct. These evasions of regulation may be difficult to detect and/or hard to police due to asymmetric information, enforcement power deficits, or various other reasons. If budget caps are imperfectly enforced, a distortion of sporting competition surfaces because now the most creative and sophisticated cheaters enjoy a competitive advantage. This can hardly be said to be consistent with sports integrity. In reality, many budget caps will fall short of being sufficiently enforceable. Notwithstanding, for the sake of the argument, I assume perfectly enforceable caps in the next section.

2.2 Distortive Effects of Budget Caps on Sporting Competition

All types of budget cap change the market allocation of budgets and as such distort competition in comparison to the market outcome. For instance, an absolute global budget cap sets a ceiling to total expenditures (B_c). For clubs i with a budget B_i, for which $B_i > B_c$ the cap entails a competitive disadvantage (= their financial competitive advantage is eroded), whereas clubs with $B_i < B_c$ benefit because their budget disadvantage is reduced. The distortive effect compared to a free-market situation increases with $|B_i - B_c|$. Of course, this distortive effect may in fact be the goal of the financial regulation since it effectively reduces the spread among the budgets and levels the financial playing field. If even the natural budget of the poorest team would exceed the cap, then the regulation enforces financial equality. Otherwise, if the cap is higher than the poorest clubs' budgets, only an imperfect erosion of financial (dis-)advantages occurs. In the latter case, the parameter of competition "acquiring financial means" is effectively and completely eroded. While being a rather radical instrument, absolute global caps create comparatively few anticompetitive effects. They merely devaluate one dimension of competition in a multidimensional contest.

Partial budget caps are similar (but not identical) to global caps if the capped expenditure class is the dominant parameter of competition, as with salary caps for player wages in ball team sports. The sports economics literature has intensely studied salary caps in the American commercial top leagues (inter alia, Fort & Quirk, 1995; Késenne, 2000a; Endo et al., 2003; Larsen et al., 2006; Vrooman, 2009; Dietl et al., 2011, 2012). Generally, this research has found that the profits of owners generally increase (but ambivalent for large-market club owners in models with cross-subsidisation), while player salaries and total revenues generally decrease. Thus, salary caps generate distributional effects away from the players towards the owners – hence, player unions playing a prominent role in American sports. The effects of salary caps on competitive balance measures are ambivalent.

However, if competition is significantly multidimensional, for instance, when competition on equipment and technology plays an important role (skiing equipment, swimsuits, technology in motor racing, etc.), shifting effects occur. Richer teams will keep spending more in this scenario than poorer teams, but they will shift their expenditures to the non-capped expenditure classes. For instance, when a motor racing series introduces a cap on spending for engine development (engine development freeze), as Formula One did a couple of years ago, high-budget teams will not stop spending their higher financial resources. Instead, they will shift their expenditure to chassis development, aerodynamics improvement, or driver and engineer wages, for instance. Possible effects (depending on the specific design of the partial cap) may include, inter alia,

- competitive disadvantages for those teams that were lagging behind in the capped area at the time of the cap introduction because they are now stuck with inferior technology/equipment and cannot invest to catch up.
- competitive advantages for those who specialised in the non-capped area because now this parameter of competition plays an increasing role.
- counter-intuitively, also competitive disadvantages for those not-so-rich teams who specialised in the non-capped area because now all the money from the rich teams is thrown at this area of development/competition and efficiency of money use becomes less paramount here as does niche competence/specialisation.

Already from these sketches it becomes clear that the effects of partial caps are rather ambiguous and dependent on the specific design. At the same time, the effects on the competitive order are not neutral at all. Some sporting-relevant competences become devalued, other appreciate, creating non-trivial distorting effects on competition.

Relative/asymmetric caps are very directly of anticompetitive concern because they cement inequality. From the outset, allowing some teams to spend more than others by regulation appears to be at odds with most notions of fairness. Still, there is also the example of Financial Fair Play that is briefly discussed below. In the shape of freezing current budgets (perhaps to prevent ruinous budget wars), asymmetric caps cement the competitive order at the time of their introduction and prevent poorer clubs from catching-up investments, thus protecting competitive advantages of the rich clubs like market power rents. In general, asymmetric caps artificially cement or create financial inequality.

Whether budget caps are static or dynamic does not change the effects of symmetric, global or partial caps other than that dynamic caps may align a control of spending behaviour with a growing market, i.e. increasing revenues. Dynamic asymmetric caps, however, may increase the inherent artificial inequality of asymmetric caps compared to static ones. If the cap addresses income or revenue figures instead of expenditures, the effects on sporting competition do not change considerably. Capping total income implies that you cannot spend more than the cap volume (provided that financing through liabilities is included in total income). A discriminatory income cap, i.e. a cap on defined sources of income or revenue, does have distorting effects on sporting competition if clubs have different strengths in different income/revenue categories. Those clubs which are either strong in the capped category or need to rely on it because they cannot substitute income/revenue sources suffer competitive disadvantages in favour of those who are comparatively stronger in the non-capped sources. Adding asymmetry and dynamics aggravates the anticompetitive effects.

2.3 The Example of UEFA Financial Fair Play

UEFA's Financial Fair Play (FFP) regulations (see for detailed descriptions and discussions, inter alia, Vöpel, 2011; Budzinski, 2014; *Franck*, 2014, 2016; Maxcy, 2014; Peeters & Szymanski, 2014, 2015; Preuss et al., 2014; Szymanski, 2014; Madden, 2015; Sass, 2016; Schubert et al. 2016) constitutes a prime example of complex and ambitious regulation. It represents a rare example of an asymmetric/relative budget cap combined with a discriminatory cap on certain revenue types. Obviously, from the name of the regulation, financial fairness is the prime target, and the integrity of sports plays a prominent role in its justification.

More precisely, the so-called break-even rule triggers the budget cap effect (originally from 2010; latest version: UEFA, 2015): *relevant* expenses must not exceed *relevant* income (with an *acceptable* deviation of up to € 5 million over three financial years[3]). Thus, the budget of any given club is capped by the *relevant* income it can create. This constitutes an asymmetric budget cap since the *relevant* income differs among clubs. A club that has earned more money is allowed to spend more than a competitor with less *relevant* income, i.e. a 'richer' club is allowed to spend more than a 'poorer' team or club.

Somewhat simplified, the UEFA defines *relevant* income to include direct football-playing revenues (like sales of tickets, beverages & food during the games and media rights, UEFA prize money, or player transfer profit), sponsorship and advertising revenues, government subsidies and grants, and indirectly football- or brand-related revenues (like merchandise or commercial activities exploiting the clubs' brand, as well as lottery revenues). Many of these 'relevant' income sources rest upon the brand value and popularity of a team and/or past success. For instance, Real Madrid enjoys significantly more income from media rights, sponsorship, advertising, merchandise, or brand exploitation than FC Copenhagen (FC København; FCK) – irrespective of current management talent. Moreover, many of these categories will not respond quickly to sporting success. In other words, even in the highly improbable event of FCK sensationally winning the UEFA Champions League, Real Madrid's

[3] See for more details on exceptions and acceptable deviations UEFA (2015).

income from most of these sources will remain significantly higher than those of FCK for a considerable period of time. This implies that FCK will be restricted by UEFA's budget cap to spend significantly less than Real Madrid *irrespective* of sporting success (and management talent)! In itself, this will drastically reduce the probability of FCK continuing to beat Real Madrid. Real Madrid is, in effect, protected by FFP from getting its market leading position challenged by FCK on the basis of talent[4] alone.

In other words, UEFA FFP regulations prevent less famous but talented teams (the *newcomers*) to close the financial gap to the famous frontrunners at the time of the introduction of FFP (the *incumbents*). The asymmetric budget cap cements the financial unlevel-playing field and blocks poorer clubs from challenging richer clubs on talent. As such, the asymmetric budget cap creates a relevant anticompetitive effect. While this takes place under the label "financial fair play", it certainly can be questioned how "fair" this actually is. UEFA's ostensible *financial antidoping* is clearly serving as an anticompetitive arrangement in this regard, manipulating sporting competition and further cementing unequal opportunities.

Now, if FCK cannot challenge Real Madrid on talent alone, it needs investment to bridge the financial gap. However, here the second element of FFP kicks in: it is also a discriminatory budget cap in relation to allowed income sources. In order to target this aspect, a closer look at – according to UEFA FFP – non-relevant income is necessary. Income from any of the following sources is not considered to be 'relevant' and does not increase the budget that clubs are allowed to spend (simplified; for details, see UEFA, 2015: 76-81, 87-91):

- non-monetary credits/income, including revaluations and appreciation/depreciation of tangible or intangible fixed assets and inventories,
- income transactions above *fair value*, for instance, sponsorship arrangements generating revenues in excess of what is standard business practice in the market, similarly supra-market revenues from corporate hospitality tickets and/or use of executive boxes as well as generally from the sale of goods and services,
- donations,
- debt waivers,
- revenues from non-football operations not related to the club (i.e. its brand),
- income in respect of a player for whom the club retains the registration, i.e. if a player (or the transfer rights to a player) who remains on the roster is sold to a third party in order to create immediate revenue.

As the budget is capped to 'relevant' income, income from these 'non-relevant' sources must not be part of the competition budget. While obvious enforceability problems of these categories are not subject to analysis here, these regulations, in essence, block a number of options for financing investment in talent. It is the economic nature of investment that it is not covered by past and current earnings. Instead, it represents the promise of a share from future earnings, of course, associated with a risk factor. Some of the options regarding this standard

[4] In the sports economics literature, talent is usually referring to playing talent. The point here is that FCK cannot use its (hypothetically) superior *management* talent to attract *and utilize* playing talent because of the financial advantage of Madrid, i.e. FCK is deterred from buying the extra talent it would need and it will quickly lose the playing talent they have to richer clubs.

business practices are blocked by FFP. Furthermore, financial injections from benefactors are largely blocked as well. The discriminatory element of the FFP budget cap further strengthens the anticompetitive effects of the financial regulation since it effectively blocks several ways for newcomers to finance investment to bridge the financial gap to the incumbents. Thus, it further protects the incumbents' rents and competitive positions from challenges by newcomers.

The second effect is, at least partly, deliberate: combating the (perceived) distortion of competition by financial injections from wealthy benefactors (sometimes labelled *sugar daddies* in the literature; Lang et al., 2011; Franck, 2014; Sass, 2016) and/or companies (examples like Paris St. Germain and Manchester City come to mind). When it comes to fairness, however, this story can be told in different ways. On the one hand, *buying success* sounds unfair, on the other hand, *foreclosure* of the market and no real chance for other teams than the big incumbents to win on a European level sounds unfair as well. RB Leipzig represents an interesting case in question. Leipzig is a traditional football city in Germany with a high number of dedicated fans. The former famous Leipzig football club, Lokomotive Leipzig (and its successors), lost all competitiveness due to long periods of mismanagement. Eventually, Red Bull stepped into the vacuum and created a new team – RasenBall Leipzig – and with a combination of financial injections (outside UEFA's FFP world) and clever management it competed through the ranks and now provides a new challenge to the best football clubs in Germany's Bundesliga. Is it unfair competition – or would it rather have been unfair to, in effect, permanently deny Leipzig's football community premier-level football? After all, without the financial injections, it does not seem to be possible to enter the top segment of the market, even in a longer period of time.

Very recently, the first empirical analyses of the effects of UEFA's FFP have been published, confirming several of the theoretically derived predictions. FFP comparatively increased the profitability of clubs falling under the regulation (Ahtiainen & Jarva, 2022; Alabi & Urquhart, 2023; Caglio et al. 2023; Garcia-del-Barrio & Agnese, 2023) but decreased competitive balance at the European level (Caglio et al. 2023) and increased audit fees (Mareque et al. 2018). None of these studies finds a significant decrease in financial imbalances.

Amidst criticism and considerable enforcement problems, UEFA reformed the FFP regulations and replaced them in 2022 with the so-called Financial Sustainability Regulations (FSR). While keeping a modified version of the relevant income calculation, the core of the reform is the introduction of a novel squad cost control (UEFA, 2023). It limits expenses on player and coach wages, net transfers spending, and (interestingly) agent fees to 70 per cent of the "relevant" club revenue from the 2025/2026 season on (transitional arrangements set the limit at 90 per cent in 2023/2024 and 80 per cent in 2024/2025). While moving the regulation more in the direction of a salary cap, the regulation maintains its asymmetric and discriminating (regarding income sources) character. Except for a stronger re-distribution of revenues away from the squad members (players, coaches, agents) and towards the club owners, the modified regulation cannot be expected to lead to effects much different from those of FFP.

2.4 The Example of Formula One

After more or less successfully experimenting with partial budget caps, such as an engine development freeze, FIA Formula One Motor Racing introduced a general budget cap beginning in the 2021 season (FIA, 2022). By contrast to the UEFA example, the F1 budget cap limits total spending of F1 teams within a calendar year, initially (for the 2021 season) to 145 million US$ per team. This number depends on several factors such as the number of races per season and cost development. Initially, the cap was thought to be dynamically reduced season by season. However, high inflation and an increasing number of races implied an annually rising budget maximum for 2022-2024. Furthermore, an additional Capital Expenditure Budget for infrastructure investments by teams exists which apparently has recently been asymmetrically increased, with smaller or less successful teams being granted a larger allowance than top teams.[5]

While the general character of the F1 budget cap, i.e. the same amount of budget for each team, should favour a more balanced competition as top teams reduce their spending and financial imbalances erode, it must be noted that the cap was set above the budget that the smallest teams were spending pre-budget cap (approx. 110-115 US$). Nevertheless, an increasing competitive balance should be expected, eroding the financial advantages (whether "deserved" or not) of the leading teams. The extra Capital Expenditure Budget, which is heading to a reversed distribution of spending allowances, should support this tendency in the long run. Two implications should not be overlooked. First, there are a number of expenses that are excluded from the budget cap, notably driver salaries.[6] On the one hand, this avoids the negative effect on athlete income that budget caps usually have. On the other hand, it allows richer teams to outbid other teams in the competition for the best talent. Second, the teams that spent more than the capped budget before the cap's introduction, now considerably increase their profits as they cash-in the revenues that (considerably) exceed their expenses.

After a lengthy and not very transparent auditing process, the FIA announced in October 2022 that three out of ten teams were found to have broken the budget cap regulations for the 2021 season. In the case of the Williams team, the breach "only" related to missing the deadline for the submission of documentation. The team was fined US$ 25,000 for this procedural violation. Also, for a purely procedural breach, Aston Martin was fined US$ 450,000; neither violation involved spending that exceeded the cap. By contrast, the Red Bull team was found to have wrongly excluded expenses from the cap in almost a dozen different cost categories, and, thereby, freed the significant amount of 1.9 million US$ for additional spending on the technical development of their car. After negotiations, FIA and Red Bull concluded a mutual agreement in October 2022, stating a budget cap violation of a little more than 400,000 €.[7] This yielded a number of sanctions, in particular: (i) a financial penalty of 7 million US$ (payable outside the budget cap, i.e. not reducing the available budget), and (ii) a "minor" sporting penalty of a 10

[5] See, for instance, F1 teams granted cost cap break Ferrari calls 'dangerous' - The Race (the-race.com) (accessed 2023-12-09).

[6] Other exclusions include, inter alia, costs directly attributable to marketing activities, the salaries of the three highest-earning non-driver team members, defined heritage asset activities, taxes, financial and legal costs, etc. (Art. 3 of the regulation). Everything that is not explicitly mentioned in this paragraph is included under the cap.

[7] The main difference to the original number comes down to a not further specified "notional tax credit" that could have been included in the submission at Red Bull's favour.

per cent reduction both in their allocated Wind Tunnel Testing and Computational Fluid Dynamics (CFD) limits, i.e. the time they are allowed to use these two relevant development tools has been reduced for one year (November 2022 – November 2023).[8]

The case caused considerable controversy because Red Bull narrowly won the 2021 world driver championship in a season final that was controversial in its own right. Among the controversial points was that the sanctions against Red Bull could only affect their future competitiveness but did not remedy any advantage they enjoyed in the season where they overspent. Furthermore, Red Bull went on to dominate the 2022 and 2023 seasons, winning both the world drivers' and the world constructors' championship in both years with ease. This raised questions about the effectiveness of the sanctions. Overall, the implementation of a budget cap in F1 confirms the experience with UEFA's FFP that enforcement is a crucial and difficult factor regarding such cap regulations.

Nevertheless, for the 2022 season, no budget cap violations were reported. Even though the Red Bull domination in the 2022 and 2023 seasons is among the most striking ones in Formula One history, it is too early to draw conclusions on the competitive effects of this unique budget cap.

3. Allocation of Common Revenues as Financial Regulation

Virtually all professional sports leagues and championships generate common revenues through the marketing of the common product (for instance, use of the league brand for advertising and merchandising, but also for league/championship title sponsorships like the "Penny Deutsche Eishockey Liga" or the "ABB FIA Formula E World Championship", etc.) and, more often than not, through the centralised sale of media rights, in particular traditional and online broadcasting rights. These common revenues are either collected by the market-internal regulator (the competent sports association) itself or by a promoter who is usually in the ownership of either or both the competent sports association and/or the participating teams.[9] These common revenues need to be distributed among the participating teams and the way this is done represents another avenue of financial regulation. Depending on how the common revenues are distributed, different effects on sporting competition result.

Four different types of distribution, which represent economically speaking horizontal allocation mechanisms, can be distinguished (Budzinski & Müller-Kock, 2018: 219):

- *equal allocation*, i.e. each team receives the same share of the common revenues,
- *performance-based allocation*, i.e. teams that perform better (higher win or points score, better position in the championship ranking, etc.) receive a higher share of the common revenues than those with worse performance,
- *reverse-performance-based allocation*, i.e. teams performing better receive a smaller share of the common revenue than those who perform worse, and

[8] See Red Bull enter an Accepted Breach Agreement with FIA over breach of 2021 Financial Regulations | Formula 1® (accessed 2023-10-09).

[9] Formula One motor racing represents a notable exception where the promoter is an independent investment company seeking to maximise its own profits from the sport. This creates scope for market power abuses by the promoter at the expense of the competing teams (see for details on this case Budzinski & Müller-Kock, 2018).

- *brand-value-based allocation*, i.e. teams with a larger fan-base (however this is measured) and/or a higher marketing potential (past success, traditions, etc.) receive higher shares of the common revenues.

Obviously, each category (except equal allocation) covers a wide range of allocation schemes with different degrees of inequality of the revenue allocation. Of course, these categories can be combined, for instance, a defined percentage of the common revenues may be allocated equally, another percentage performance-based, etc.[10]

Regarding the effects of these allocation mechanisms, it needs to be considered whether the revenues could alternatively be collected individually by the teams/clubs, as in the case of broadcasting rights, or less realistically, series/league title sponsorships and brand licensing revenues. In the case of a collective sale of broadcasting and related media rights in team sports leagues, the individual broadcasting rights of the clubs regarding their home games are tied into one league-wide bundle, thus completely eroding competition among suppliers of broadcasting rights. This constitutes a hardcore cartel that subsequently acts as a monopolist towards the customers (directly: media companies buying broadcasting rights; indirectly: media consumers[11]). While this clearly creates anticompetitive effects like higher prices, limited quantity, and reduced innovation dynamics (for instance, regarding innovative new media coverage), the literature is split on whether (sufficiently strong) countervailing efficiency gains exist that justify this cartel (Késenne, 2000b, 2009; Falconieri et al., 2004; Gürtler, 2007; Noll, 2007; Peeters, 2011, 2012; Budzinski, 2019; Budzinski et al., 2019). If an individual sale system is possible, opting for a collective system implies that the distribution of financial means among the clubs is changed. If the common revenue is inevitably collective in nature, no such benchmark for comparison exists. But the allocation mechanism still affects sporting competition.

If no competitive benchmark exists, a case can be made for equal allocation representing the least distortion of sporting competition. The common product rests on the cooperation of all participants and, thus, all participants equally share its revenues. Another case can be made for brand-value-based allocation. The hypothetical contributions to the value of the common product/brand may not be equal. More popular teams with higher fan-bases may contribute more to it than less popular ones. Thus, defining proxies for brand value (or fan share/popularity) may imperfectly reflect the actual contribution to the generation of the common revenues and, thus, may represent the 'best' allocation. Performance-based and Reverse-performance-based allocations, however, will always include some distortive effects, either advantaging better-performing or lower-performing teams.

If a competitive benchmark like the option of an individual sale system of broadcasting rights exists (at least hypothetically), distortive effects relate to the allocation that would result from

[10] For an overview and a discussion of allocation schemes used by selected premier-level professional leagues and championships see Budzinski & Müller-Kock (2018: 223-227).

[11] If, for instance, a TV station spent more for sports broadcasting rights due to the monopoly-like price structure dictated by the cartel, then the whole TV audience will have to contribute to the higher prices by accepting higher pay-TV prices, more advertising on free TV, and less investment in other (including non-sports) programmes.

the competitive solution. Then, a brand-value based allocation (trying to proxy brand value by estimating the size of fanbases (Italian football), employing television viewership/rankings (English Premier League) and other imperfect popularity measures) basically attempts to mimic the competitive benchmark because popularity, fan-base and similar aspects largely determine the value of a team's brand. Current performance is certainly another factor in this. However, teams with popular names (brands) will draw more demand even if they perform worse than no-name teams. Consequently, brand-value based allocation systems have the lowest distortive effects and the closer they mimic the competitive benchmark, the lower is the distortion effect. Equal allocation, in contrast, alters the allocation compared to the competitive benchmark and distorts sporting competition in the sense that it disadvantages those teams that could earn higher media revenues in an individual sale system. In other words, in tendency, teams that are very popular with the fans suffer and less popular teams gain. Performance-based allocations also distort sporting competition as they benefit better performing teams irrespective of their popularity with the fans. Thus, bad-performing popular teams lose, whereas good performing low-popularity teams win in financial terms. With reverse-performance-based systems, it is the other way around (bad-performing-low-popularity teams gain, good-performing-high-popularity teams lose).[12] Keep in mind that from a consumer (fan) welfare perspective disadvantaging popular teams is, ceteris paribus, welfare decreasing since (somewhat tautologously) more people are made happy when popular teams win than when unpopular teams win.

So far, brand-value-based allocation mechanisms appear to be the least distortive ones regarding the implicit financial regulation following from distributing common revenues. Note, however, that mirroring the competitive benchmark very closely makes it harder to justify the existence of a cartel (collective sale system) with its far-reaching anticompetitive effects. On the other hand, economic considerations may motivate the choice of a specific allocation scheme that benefits consumers (fans) and welfare in the end. In other words, common revenues may purposefully be employed to improve sporting competition.

Systems of equal allocation and reverse-performance allocation, for instance, follow *competitive balance considerations*. By advantaging poor-performing teams, their ability to compete with the previously successful ones shall be enhanced and improved, thus, creating closer and more balanced competition. The underlying economic rationale is – somewhat simplified – that more competitive balance increases the uncertainty of outcome, which in turn makes the sporting competition more attractive to fans and, consequently, increases demand and fan welfare (Rottenberg, 1956; Neale, 1964; El-Hodiri & Quirk, 1971; Fort & Quirk, 1995). If this were true, it would represent a justification for deviating from the competitive benchmark. However, since the – very substantial – sports economics literature on the demand and welfare effects of competitive balance is very controversial (inter alia, Szymanski & Késenne, 2004; Coates et al., 2014; Humphreys & Zhou, 2015; Budzinski & Pawlowski, 2017; for a literature overview, Pawlowski & Nalbantis, 2017), the (beneficial) effects of equal or

[12] It is quite notable and interesting, how such a perspective contrasts with and goes beyond first glance fairness notions.

reverse-performance based allocation mechanisms probably needs to be demonstrated case-by-case.

Systems of performance-based allocation follow *incentive considerations*. Financial incentives to perform better add to intrinsic motivation to win. While this may be unnecessary when it comes to meaningful contests like winning the league or the championship, research has shown that it may be necessary to keep competition alive in mid-table, in particular towards the end of a season (Feddersen et al., 2012). Whether these limited additional effects can justify an otherwise anticompetitive cartel (collective sale systems), however, appears to be doubtful.

From an economic perspective, indirect financial regulation through the allocation of common revenues plays an important role when it comes to the potential distortive effects of financial regulation. Different allocation schemes affect sporting competition in different ways and to different extents. Since the real world of sports is both manifold and creative in this respect, this chapter can outline some basic considerations and each case must be carefully looked at. This becomes even more important if one considers that the internal allocation of common revenues may well be motivated by power struggles and (individual or collective) anticompetitive intentions instead of goals such as the attractiveness of the sport and fan welfare (Budzinski & Müller-Kock, 2018).

A similar phenomenon is represented by explicit mechanisms to re-allocate individual revenues among the clubs. Gate-revenue sharing (inter alia, Késenne, 2000b), for instance, may imply that each club collects its own revenues at the gate but then pays a share of these revenues into a common pool, which is then re-allocated among the clubs, usually with the poorer clubs (in terms of gate revenues) receiving a net-benefit in financial terms (like the NFL straight-pool sharing arrangement from 2001). So-called luxury taxes implement a (progressive) tax on spending above a defined budget threshold (Dietl et al., 2010). The tax revenue is then distributed among all clubs. Thus, it both sets disincentives to budget expansion (without a 'hard' budget cap) by making it more expensive and re-allocates financial means within the league. Examples are the luxury tax arrangements of U.S. Major League Baseball (MLB) and the U.S. National Basketball Association (NBA). These instruments of financial regulation have in common that they follow competitive balance considerations and fall into a comparable category as systems of equal allocation and reverse-performance-based allocation, as discussed above.

4. Standards for Sound Financial Management

Another area of financial regulation is the implementation of mandatory standards for financial management, for instance, accounting standards or audit requirements. Such standards may be set as preconditions to acquire a license to participate in a league, tournament or championship. Many leagues have implemented a licensing system that require clubs to submit financial data and business plans and provide external auditing reports according to predefined standards. A more specific example is another element of UEFA's Financial Fair Play Regulations, namely the so-called no overdue payables rule that stipulates that clubs participating in UEFA's club competitions must not have overdue payments to players or other employees, other football clubs, or social and tax authorities (UEFA, 2015: 28-31; UEFA, 2023).

Standards for sound financial management, if properly defined and enforced, represent an effective instrument against overly expansive and excessively risky financial practices. Furthermore, they can considerably reduce the danger of teams running into insolvency mid-season. Mid-season insolvencies may disturb match operations and endanger the integrity of the competition. At the same time, the standards themselves do not distort sporting competition as long as they follow accepted business practices, are transparent and enforced in a non-discriminatory way, and rely on tools and competences that are available to all the participants. However, costs may be an issue; standards leading to very high costs of accounting and financial management may disadvantage poorer clubs.

Financial guarantees and security deposits are a different story. On the one hand, they may also serve to safeguard clubs' economic viability following the logic that sound finances are required to be able to provide the guarantees. Moreover, the deposited money may be used to keep a clubgoing until the end of the season in the case of insolvency and, thus, prevent disruptive effects on match operations. On the other hand, guarantee and deposit requirements may work as entry barriers, in particular if they are excessive. Furthermore, adverse incentives and moral hazard problems may be reinforced when managers know they will be bailed-out by a fund. The German Bundesliga-case of Arminia Bielefeld provides an interesting example (Budzinski & Müller, 2013: 276-278, 280-281). In the second level league (2. Bundesliga), clubs could prevent insolvency by receiving finance from an insurance fund (to which all teams had contributed) but had to pay a price in terms of three penalty points subtracted in the rankings. When Arminia Bielefeld found itself in a sportingly hopeless situation halfway through the 2010-2011 season, it activated the insurance fund – and the penalty points effectively did not hurt them at all (they just remained dead-last).

5. Conclusion

Financial regulation in sports is usually discussed in the context of representing an instrument against financial doping. Notwithstanding the merits of this discussion, this chapter takes the opposite perspective and analyses how financial regulation itself may anticompetitively influence and manipulate sporting results. Virtually every regulative financial intervention distorts sporting competition to some extent and creates beneficiaries and losers. Sometimes, the actual winners and losers of financial regulation stand in line with the (legitimate) goals of the regulation. For instance, if the goal is to remedy financial imbalances, then a global and symmetric cap may generate the 'right' winners (low-budget teams/clubs) and losers (high-budget teams/clubs) – all in relative terms, of course. If the goal is to prevent mid-season insolvencies, a licensing system requiring defined standards for accounting, financial management, and external auditing may represent an adequate instrument.

However, in many cases the winners and losers of financial regulation do not match the (announced) goals. This can be due to unintended consequences and side-effects of regulation – a topic well-known in economic analysis. It can also be a consequence of vested interest of powerful regulatory bodies and/or participants (like teams or clubs) that are sufficiently powerful to influence the market-internal regulator (lobbyism). Again, politico-economic deficiencies of real-world regulations are another well-known topic in economics. Unfortunately, at least so far, these lines of reasoning have often been neglected in sports

economics analysis.[13] Real-world financial regulation, thus, may distort sporting competition by protecting competitive advantages of powerful teams and clubs, cementing the competitive order, deterring market entry by new (team/club) talent, serving the regulatory interests of sports associations and/or their officials, and many more.

In this chapter, various types of budget caps, different forms of allocation mechanisms of common revenues as well as financial standards are analysed regarding possible and potential anticompetitive effects. Inter alia, asymmetric budget caps, performance-based revenue allocation, and financial guarantees and security deposits are identified as likely to produce anticompetitive effects. Naturally, the analysis relies on stylised regulations and specific examples. It cannot offer a comprehensive discussion of all conceivable variations and combinations of financial regulation. As a consequence, the major implication is to advocate critical case-by-case (theory-driven and empirical) analyses of real-world financial regulation that focus on the actual effects on competition and do not take the announced goals for granted.

References

Andreff, W. (2007), French Football - A Financial Crisis Rooted in Weak Governance, in: Journal of Sports Economics, Vol. 8 (6), 652-661.

Ahtiainen, S. & Jarva, H. (2022), Has UEFA's financial fair play regulation increased football clubs' profitability? European Sport Management Quarterly, 22(4), 569-587.

Alabi, M. & Urquhart, A. (2023), The Financial Impact of Financial Fair Play Regulation: Evidence from the English Premier League, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4504105.

Bird, P. (1982), The Demand for League Football, in: Applied Economics, Vol. 14 (6), 637-649.

Budzinski, O. (2012), The Institutional Framework for Doing Sports Business: Principles of EU Competition Policy in Sports Markets, in: International Journal of Sport Management and Marketing, Vol. 11 (1-2), 44-72.

Budzinski, O. (2014), The Competition Economics of Financial Fair Play, in: O. Budzinski & A. Feddersen (eds.), Contemporary Research in Sports Economics: Proceedings of the 5th ESEA Conference, pp. 77-98. Frankfurt am Main: Peter Lang.

Budzinski, O. (2017), Budgetungleichgewichte und Budgetregulierung im Profisport: Zur Bedeutung von Rattenrennen, in: T. Pawlowski & M. Fahrner (eds.), Arbeitsmarkt und Sport – eine ökonomische Betrachtung, pp. 65-83. Schorndorf: Hofmann.

Budzinski, O. (2019), Competition Policy in Sports Markets, in: The Sage Handbook of Sports Economics, pp. 144-153. Los Angeles: Sage.

Budzinski, O. & Feddersen, A. (2023), Should Organizing Premier-Level European Football Be a Monopoly? And Who Should Run It? – An Economists' Perspective, in: J. Kornbeck (ed.), EU Sports Antitrust Law and Governance: The Next Frontier?, pp. 85-101. Cheltenham: Elgar 2023.

[13] But see Keshock et al. (2015) for an interesting story of the political economy of sports events and promotion.

Budzinski, O., Gaenssle, S. & Kunz-Kaltenhäuser, P. (2019), How Does Online Streaming Affect Antitrust Remedies to Centralized Marketing? -The Case of European Football Broadcasting Rights, in: International Journal of Sport Finance, Vol. 14 (3), 147-157.

Budzinski, O. & Müller, A. (2013), Finanzregulierung und internationale Wettbewerbsfähigkeit: Der Fall Deutsche Bundesliga, in: R. Dewenter, J. Haucap & C. Kehder (eds.), Wettbewerb und Regulierung in Medien, Politik und Märkten, pp. 261-290. Baden-Baden: Nomos.

Budzinski, O. & Müller-Kock, A. (2018), Is the Revenue Allocation Scheme of Formula One Motor Racing a Case for European Competition Policy? In: Contemporary Economic Policy, Vol. 36 (1), 215-233.

Budzinski, O. & Pannicke, J. (2022), Does Popularity Matter in a TV Song Competition? - Evidence from a National Music Contest, in: Creative Industries Journal, Vol. 16, https://doi.org/10.1080/17510694.2022.2147332.

Budzinski, O. & Pawlowski, T. (2017), The Behavioural Economics of Competitive Balance – Theories, Findings and Implications, in: International Journal of Sport Finance, Vol. 12 (2), 109-122.

Budzinski, O. & Szymanski, S. (2015), Are Restrictions of Competition by Sports Associations Horizontal or Vertical in Nature?, in: Journal of Competition Law & Economics, Vol. 11 (2), 409-429.

Caglio, A., Laffitte, S., Masciandaro, D., & Ottaviano, G. I. (2023), Has Financial Fair Play Changed European Football? Sports Economics Review, 3(1), 1-14.

Coates, D., Humphreys, B. & Zhou, L. (2014), Reference-dependent Preferences, Loss Aversion, and Live Game Attendance, in: Economic Inquiry, Vol. 52 (3), 959-973.

Deloitte (2023), Annual Review of Football Finance 2023, deloitte-uk-annual-review-of-football-finance-2023.pdf.

Dietl, H, Franck, E., Lang, M. & Rathke, A. (2012), Salary Cap Regulation in Professional Team Sports, in: Contemporary Economic Policy, Vol. 30 (3), 307-319.

Dietl, H., Lang, M. & Rathke, A. (2011), The Combined Effect of Salary Restrictions and Revenue Sharing in Sports Leagues, in: Economic Inquiry, Vol. 49 (2), 447-463.

Dietl, H., Lang, M. & Werner, S. (2010), The Effect of Luxury Taxes on Competitive Balance, Club Profits, and Social Welfare in Sports Leagues, in: International Journal of Sport Finance, Vol. 5 (1), 41-51.

El-Hodiri, M. & Quirk, J. (1971), An Economic Model of a Professional Sports League, in: Journal of Political Economy, Vol. 79, 1302-1319.

Endo, M. G., Florio, K. M., Gerber, J. B., & Sommers, P. M. (2003), Does a Salary Cap Improve Competitive Balance? Atlantic Economic Journal, 31(4), 388-408.

Falconieri, S., Palomino, F. & Sákovics, J. (2004), Collective versus Individual Sale of Television Rights in League Sports, in: Journal of the European Economic Association, Vol. 2 (5), 833-862.

Feddersen, A., B. R. Humphreys & B. P. Soebbing (2012), Contest Incentives in European Football, Working Paper No. 2012-13, University of Alberta.

FIA (2022), Formula 1 Financial Regulations, Issue 9, formula_1_-_financial_regulations_-_iss_9_-_2022-02-18.pdf (fia.com).

Fort, R. & Quirk, J. (1995), Cross-Subsidization, Incentives and Outcomes in Professional Team Sports Leagues, in: Journal of Economic Literature, Vol. 33 (3), 1265-1299.

Franck, E. (2014), Financial Fair Play in European Club Football - What is it All About?, in: International Journal of Sport Finance, Vol. 9 (3), 193-217.

Franck, E. (2016), A Comment on the Newly Revised "2015 Version" of the UEFA Club Licensing and Financial Fair Play Regulations, UZH Business Working Paper, Universität Zürich.

Gammelsæter, H. & Senaux, B. (2011), Understanding the Governance of Football across Europe, in: H. Gammelsæter & B. Senaux (eds.), The Organisation and Governance of Top Football across Europe: An Institutional Perspective, London: Routledge, 268-291.

Garcia-del-Barrio, P. & Agnese, P. (2023), To comply or not to comply? How a UEFA wage-to-revenue requirement might affect the sport and managerial performance of soccer clubs, in: Managerial and Decision Economics, 44(2), 767-786.

Gürtler, O. (2007), A Rationale for the Coexistence of Central and Decentral Marketing in Team Sports, in: German Economic Review, Vol. 8 (1), 89-106.

Humphreys, B. R. & Zhou, L. (2015), The Louis-Schmeling Paradox and the League Standing Effect Reconsidered, in: Journal of Sports Economics, Vol. 16 (8), 835-852.

Késenne, S. (2000a), The Impact of Salary Caps in Professional Team Sports. Scottish Journal of Political Economy, 47(4), 422-430.

Késenne, S. (2000b), Revenue Sharing and Competitive Balance in Professional Team Sports, in: Journal of Sports Economics, Vol. 1 (1), 56-65.

Késenne, S. (2009), The Impact of Pooling and Sharing of Broadcasting Rights in Professional Team Sports, in: International Journal of Sport Finance, Vol. 4 (3), 211-218.

Keshock, C. M., Forester, B. & Holden, S. (2014), Gridiron Games – A Case Analysis of Turf War Issues and the Economic, Social, Cultural, and Political Incentives for Government Subsidization, in: O. Budzinski & A. Feddersen (eds.), Contemporary Research in Sports Economics: Proceedings of the 5th ESEA Conference, pp. 231-244. Frankfurt am Main: Peter Lang.

Könecke, T. & Schubert, M. (2014), Socio-Economic Doping and Enhancement in Sport: A Case-based Analysis of Dynamics and Structural Similarities, in: O. Budzinski & A. Feddersen (eds.), Contemporary Research in Sports Economics: Proceedings of the 5th ESEA Conference, pp. 97-114. Frankfurt am Main: Lang.

Lang, M., Grossman, M. & Theiler, P. (2011), The Sugar Daddy's Game: How Wealthy Investors Change Competition in Professional Team Sports, in: Journal of Institutional and Theoretical Economics, Vol. 167 (4), 557-577.

Larsen, A., Fenn, A. J., & Spenner, E. L. (2006), The Impact of Free Agency and the Salary Cap on Competitive Balance in the National Football League, in: Journal of Sports Economics, 7(4), 374-390.

Madden, P. (2015), Welfare Economics of "Financial Fair Play" in a Sports League With Benefactor Owners, in: Journal of Sports Economics, Vol. 16, 159-184.

Mareque, M., Barajas, A., & Lopez-Corrales, F. (2018), The Impact of Union of European Football Associations (UEFA) Financial Fair Play Regulation on Audit Fees: Evidence from Spanish Football. International Journal of Financial Studies, 6(4), 92-115.

Maxcy, J. (2014), The American View on Financial Fair Play, in: O. Budzinski & A. Feddersen (eds.), Contemporary Research in Sports Economics: Proceedings of the 5th ESEA Conference, Frankfurt a.M.: Lang, 57-73.

Morrow, S. (2011), History, Longevity, and Change: Football in England and Scotland, in: H. Gammelsæter & B. Senaux (eds.), The Organisation and Governance of Top Football across Europe: An Institutional Perspective, London: Routledge, 46-61.

Neale, W. C. (1964), The Peculiar Economics of Professional Sports: a Contribution to the Theory of the Firm in Sporting Competition and in Market Competition, in: Quarterly Journal of Economics, Vol. 78 (1), 1-14.

Noll, R. G. (2007), Broadcasting and Team Sports, in: Scottish Journal of Political Economy, Vol. 54 (3), 400-421.

Pawlowski, T. & Nalbantis, G. (2017), Competitive Balance: Measurement and Relevance, in: Handbook of Sports Economics, Sage Publications, forthcoming.

Peeters, T. (2011), Broadcasting Rights and Competitive Balance in European Soccer, in: International Journal of Sport Finance, Vol. 6 (1), 23-39.

Peeters, T. (2012), Media Revenue Sharing as a Coordination Device in Sports Leagues, in: International Journal of Industrial Organization, Vol. 30 (2), 153-163.

Peeters, T. & Szymanski, S. (2014), Financial Fair Play: Winners and Losers on and off the Pitch, in: O. Budzinski & A. Feddersen (eds.), Contemporary Research in Sports Economics: Proceedings of the 5th ESEA Conference, Frankfurt a.M.: Lang, 17-33.

Peeters, T. & Szymanski, S. (2015), Financial Fair Play in European Football, in: Economic Policy, Vol. 29, 343-390.

Preuss, H., Haugen, K. & Schubert, M. (2014), UEFA Financial Fair Play: The Curse of Regulation, in: European Journal of Sport Studies, Vol. 2 (1), 33-51.

Quirk, J. (1973), An Economic Analysis of Team Movements in Professional Sports, in: Law and Contemporary Problems, 38 (1), 42-66.

Rottenberg, S. (1956), The Baseball Player's Labour Market, in: Journal of Political Economy, Vol. 64 (3), 242-258.

Sass, M. (2016), Glory Hunters, Sugar Daddies, and Long-Term Competitive Balance under UEFA Financial Fair Play, in: Journal of Sports Economics, Vol. 17 (2), 148-158.

Schubert, M. & Hamil, S. (2018), Financial Doping and Financial Fair Play in European Club Football Competitions, in: Palgrave Handbook on the Economics of Manipulation in Professional Sports, Palgrave, 135-157.

Schubert, M. & Könecke, T. (2015), Classical Doping, Financial Doping and Beyond: UEFA's Financial Fair Play as a Policy of Anti-doping, in: International Journal of Sport Policy and Politics, Vol. 7 (1), 63-86.

Schubert, M., Könecke, T. & Pitthan, H. (2016), The Guardians of European Football – UEFA Financial Fair Play and the Career of Social Problems, in: European Journal for Sport and Society, Vol. 13 (4), 296-324, doi:10.1080/16138171.2016.1248094.

Storm, R. K. & Nielsen, K. (2012), Soft Budget Constraints in Professional Football, in: European Sport Management Quarterly, Vol. 12, 183-201.

Szymanski, S. (2014), Fair Is Foul: A Critical Analysis of UEFA Financial Fair Play, in: International Journal of Sport Finance, Vol. 9 (3), 218-229.

Szymanski, S. & Késenne, S. (2004), Competitive Balance and Gate Revenue Sharing in Team Sports, in: The Journal of Industrial Economics, Vol. 52 (1), 165-177.

UEFA. (2015), UEFA Club Licensing and Financial Fair Play Regulations (Edition 2015), www.uefa.org/MultimediaFiles/Download/Tech/uefaorg/General/02/26/77/91/2267791_DOWNLOAD.pdf.

UEFA. (2023), UEFA Club Licensing and Financial Sustainability Regulations (Edition 2023), UEFA Club Licensing and Financial Sustainability Regulations • Reader • UEFA-Dokumente.

Vöpel, H. (2011), Do We Really Need Financial Fair Play in European Club Football? An Economic Analysis, in: CESifo DICE Report, Vol. 9 (3), 54-60.

Vrooman, J. (2009), Theory of the Perfect Game: Competitive Balance in Monopoly Sports Leagues, in: Review of Industrial Organization, Vol. 34(1), 5-44.