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DOES BREAK-EVEN REGULATION OF SOCCER CLUBS MAKE SENSE?

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Abstract Based largely on some simple theoretical economic models of sports leagues, the paper argues that forcing clubs in a league to at least break-even may make no economic sense at all. By evaluating elementary consumer and other surpluses, it is argued that the imposition of a break-even requirement (BER) will, in extremis, create a Pareto disimprovement. A BER is the cornerstone of UEFA's Financial Fair Play (FFP) regulations for European soccer, whereby, in particular, the injection of funds by benefactor owners into a club is outlawed. The paper concludes negatively towards FFP as a regulatory device for the industry.

Keywords; benefactors, professional sports leagues, break-even requirement, Financial Fair Play.

JEL classification numbers; L10, L83

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Introduction

UEFA's Financial Fair Play (FFP) regulations for European professional soccer have essentially two prongs. First is the "No overdue payables rule" (NOPR) whereby, on a certain census date each season, each club must have no outstanding amounts owed to other clubs, employees or social/tax authorities. Secondly, each club must satisfy the "Break-even requirement" (BER) in that expenditure on players must not exceed soccer-related income, where the latter can include matchday gate and other receipts, proceeds from merchandising and broadcasting, and sponsorship income (if at fair value); the most notable exclusion from soccer-related income would be funds injected (e.g. as gifts) by wealthy benefactor (or sugar-daddy) club owners.

Prima facie, it seems strange that an industry should be imposing regulation that disbars the provision of willingly supplied funds by investors. Pointing towards some simple economic models and sporting contexts, the paper argues that such regulation is indeed strange, possibly completely without any welfare economics foundation. The arguments raise serious questions about the advisability of adopting a BER in the sporting context generally, and in UEFA's European professional soccer jurisdiction in particular.

On the other hand NOPR seems unobjectionable. BER is the focus here, and it will be assumed in the models that an effective NOPR operates, policing club budget constraints, constraints that will admit endogenous benefactor injections as income. Problems with soft budget constraints (see Franck (2014), Franck and Lang (2014)) are assumed dealt with by NOPR, as they should be.

The paper brings together themes from a number of recent contributions to the sports economics literature relating to consequences of alternative forms of club governance in a sports league: Franck (2010), Lang et al. (2011), Madden (2012a), Madden and Robinson (2012) and Madden (2012b), with most attention to the last of these.

The next 2 sections reports on contexts quite distanced from UEFA's jurisdiction where the lack of credibility of a BER seems transparent.

Horse Racing

In horse racing, the owners of the competing entities, and so the direct analogues of soccer club owners, are the horse-race owners. And it is clear that over a long period, these owners have suffered persistent and extensive losses. For instance, in England (where it currently is the second largest sport behind soccer in terms of revenue generation): "…most owners found racing a losing game. This can be demonstrated by a look at some financial statistics of racing in the first decade of the twentieth century. At the *very least* the total costs of ownership averaged £1,121,670 a year….Nevertheless, even this underestimated minimum cost could not be covered by prize money which in the same period averaged only £500,166 a year, a shortfall of over £621,000." (Vamplew 1976, p.182); and a century later, "The odds are stacked against the racehorse owner in Britain. Not only does merely one horse in ten ever

win a race, but, in aggregate, prize money covers less than a quarter of ownership costs (not including the purchase price of the horse which generally devalues by about 70 per cent between purchase and later sale!). Although some owners can make money, in general they pay for their pleasure. Hence, though they may hanker after triumphs, the majority of owners regard the sport as a hobby not as a business activity and are prepared to subsidise it." (Vamplew and Kay, 2005, p. 225); finally, most recently (from Deloitte's *Economic Impact of British Racing*, 2013, p.4), "Owners incurred direct gross expenditure of £389m whilst receiving income of £85m through prize money and sponsorship. This resulted in net expenditure of £304m (excluding horse purchases)…"

It is clear that persistent and large-scale fund injection by owners is prevalent in horse-racing, with owners most likely motivated by consumption (rather than investment) benefits such as the thrill of seeing their horse compete in and preferably win a high quality race, the excitement of the raceday experiences, and so on. Whilst the analogy with soccer is of course imperfect (and may benefit from further exploration), it does dispel the knee-jerk reaction that owner losses should be outlawed in the sporting context – for sure no-one has suggested a BER for horse-race owners.

A low level soccer league

This story is about the evolution of an amateur soccer league towards professionalism, and is in 3 stages, based on an underlying economic model outlined in the appendix, where symmetry assumptions make clean definitive conclusions immediately tractable. The story is motivated by personal observations.

SCENARIO 1: Various neighbouring villages in England (say) each have a village soccer team, that play each other in a league. The players are amateurs, of homogenous talent levels, but short of the ability to play in higher level professional leagues. Each team plays its home games on a pitch in the village public park, and a few locals attend games, gaining surplus as spectators. The surplus depends on the quality of the home team and on that of the away team; spectators admire and enjoy watching higher skill players, and locals would like their team to be better than the visitors, but perhaps not too much. However homogeneity of amateurs means teams are of equal quality – all games have equal "competitive balance".

LESSON 1: For the local spectators the league games constitute a non-excludable, non-rival public good – access to the park cannot be restricted and charged for, and crowd numbers are short of anything that would create congestion costs for spectators. The good is provided under laissez-faire because the players get a pure, private consumption/utility benefit from playing, incidentally providing a public good for the locals.

SCENARIO 2: In each of the villages, one of the spectators is very (equally) wealthy. He (or she) decides they would like to spend some of their wealth to improve the local team's quality, by paying better players from the professional leagues (at an assumed constant wage per unit of talent). All wealthy spectators (hereafter benefactors) then engage in a "arms-race" (strategic complementarity), spiralling expenditure

equilibrating with improvements in all team qualities, although (under the benefactor symmetry) teams end up with equal (but higher) qualities.

LESSON 2: Spectators in all villages are better off – absolute team qualities increase with no change in relative qualities. Player surplus in the league increases because of the payments now being made. And (because of an Inada assumption) the benefactors are also better off despite the arms-race.

REMARK: Notice that any local entrepreneurs in pursuit of profit would not wish to engage in the benefactor player expenditure activity – there are no revenues to offset the expenditure. Profit maximizing provision is dominated by benefactor provision.

SCENARIO 3: For reasons that are not quite clear, the league management committee rules that the payments to players from the pockets of benefactors are outlawed.

LESSON 3: The league reverts to scenario 1. All village spectators and benefactors are worse off, and player surplus generated by the league falls.

From low level to high level leagues

In comparison to the low level league, consider now the highest level sports leagues, such as the English Premier League (EPL) and the other major European soccer leagues, or the major North American sports leagues (NFL, MLB, NHL, NBA). The first and crucial difference is that the public good is now excludable, and spectators pay to gain entrance to stadiums, broadcasters pay for TV rights, etc., which creates revenues and so possibly profits. Hence, secondly, teams may now attract the interest of profit-maximizing entrepreneurs. The study of such leagues therefore becomes an exercise in the analysis of excludable public goods, on which there is a developed literature; however the sports league context adds dimensions not found there. In particular the league consists of a set of excludable public good providers (teams) each of whose consumers (spectators or fans) derive utility from the quality of their team, but also those of other teams – there is an externality at work. In addition each provider is usually thought of as having monopoly power over a subset of consumers (partisan fans). There is certainly no a priori reason why profit maximizing provision should produce a socially desirable outcome in the context.

Indeed the sports league economics literature has for some time studied alternative team (or club) objectives to profit maximization. Relatively early contributions tended to think of European soccer clubs as so-called “win-maximizers”, aiming to produce the best possible team quality subject to an exogenous, non-negative budget constraint; Kesenne (2007) provides a full account of the literature at that time on profit-maximizing leagues in comparison with the win-maximizing alternative. Since then Madden (2012a) has introduced a third objective type, “fan welfare maximization”, (motivated by the member’s club constitution of some clubs, especially in Germany and Spain), whereby clubs aim to maximize the aggregate surplus accruing to their fans, again subject to a non-negative budget constraint; Madden and Robinson (2012) extend further to objectives which are weighted averages of the earlier trio. A recurrent theme is that profit maximization does not

perform well in terms of its impact on surpluses compared to objectives which respect fan interests in some direct way.

Most recently, Lang et al. (2011) and Madden (2012b) study leagues where owners may inject their own funds to enhance team quality, as benefactor owners (perhaps most prominently seen in England, but increasing in number elsewhere, and ballpark similar to the earlier low level league benefactors), thus endogenizing the non-negative budget constraint assumed in the models of the previous paragraph. The next section looks at possible motivations for benefactor behaviour.

Why do benefactors inject funds?

A natural first question is why owners are willing to inject their own funds into their club. Franck (2010) provides an excellent discussion, on which the following list of possible motives draws:

Motive 1. Ownership may produce a pure private consumption benefit to an owner. The thrill of seeing their team compete in a high quality competition and the excitement of the matchday experiences may well produce such a payoff. This is the direct analogue of the motive suggested earlier for horserace ownership, and may be what is motivating the village benefactors.

Motive 2. The pure consumption benefit in Motive 1 may derive instead from a desire of the owner to please fans. The respect and adulation from many thousands may be a payoff.

Motive 3. The benefit in Motive 2 might instead evolve from a pecuniary externality via fans. Perhaps the owner is a local businessman and producing a successful team may lead fans to consume more of the owner's products; brewers were common in this way in the early days of English soccer, for instance. Alternatively the owner might be a politician whose association with the club may curry voting favour.

With higher level professional soccer leagues in mind, e.g. the English Premier League EPL, Madden (2012b) is based on possible benefactor behaviour emanating from Motive 1 above. The conclusions reached regarding the consequences of BER are only marginally changed if instead the driving force behind injections is Motives 2 or 3. The next section recalls some of the arguments of Madden (2012b).

A high level professional league model; Madden (2012b)

The league consists of large numbers (unit masses) of 2 types of club, big market and small market clubs in terms of fanbase. The fans of each club buy season tickets for the club's home games (at prices chosen by the club), and have heterogeneous ticket valuations that depend on the quality of the home team and the average quality of the visiting teams. Quality is measured by the amount of talent in a team, and (similar to efficiency labour models) there is a talent supply curve to the league from a large number of heterogeneously talented players; the wage per unit of talent adjusts to clear the talent market, equating desired talent expenditure (chosen by clubs) to the

value of talent supply. The supply of playing talent to the league, $S(w)$, is constant elastic, with elasticity $\varepsilon \in [0,\infty]$: that is, $S(w) = w^{\varepsilon}$ if $\varepsilon < \infty$ and w=1 if $\varepsilon = \infty$, where w denotes the price of a unit of playing talent, so the talent supply curve is vertical at quantity 1 if $\varepsilon = 0$, horizontal at wage 1 if $\varepsilon = \infty$ and upward sloping though the (wage, quantity) points (0,0) and (1,1) otherwise.

Based on a uniform distribution of fan ticket valuation heterogeneity, and a maximum such valuation of $v(t_{in}, \bar{t}) = t_{in}^{\alpha} \bar{t}^{\beta}$, where t_{in} is the talent level (or quality) of team $n(\in [0,1])$ of type $i(=1,2)$ and $\bar{t}$ is the average talent (or quality) level in the league. The ticket demand curve facing this club is;

$$D_{in}(t_{in}, \bar{t}, p_{in}) = \mu_i [v(t_{in}, \bar{t}) - p_{in}]$$

where p_{in} is its ticket price, $\bar{t}$ is the average league team quality, μ_i measures fanbase and $v(t_{in}, \bar{t}) = t_{in}^{\alpha} \bar{t}^{\beta}$ with $\alpha > \beta > 0$ and $\alpha + \beta < 1/2$. It is assumed that $\mu_1 \geq \mu_2$, so that type 1 clubs are the larger fanbase, "big market" clubs. The assumption that $\alpha > \beta > 0$ captures (in $\alpha > \beta$) the partisan nature of home fans – they prefer their team to be better than the opposition, to some extent – and (in $\beta > 0$) that they do have some preference for rival teams to be of good quality.

Owner utility is assumed to have a similar base to fan utility. For the owner of club $n(\in [0,1])$ of type $i(=1,2)$, utility is;

$$U_{in} = \lambda_i u[v(t_{in}, \bar{t})] - I_{in} + m_{in}$$

Here m_{in} is the owner's wealth and I_{in} (the negative of profits) denotes funds injected by the owner; $I_{in} = wt_{in} - p_{in}\mu_i [v(t_{in}, \bar{t}) - p_{in}]$ could be negative, indicating the owner is taking profit out of the club, rather than providing funds. We assume throughout that $m_{in} - I_{in} > 0$ – owners are sufficiently wealthy to provide any fund injection that is optimal for them. λ_i is a parameter that reflects the owner's "generosity". Notice that if $\lambda_i = 0$, the owner becomes a pure profit-maximizer.

Given the pure private consumption benefit behind the assumed Motive 1, and the monopoly power over their own fans, owners will choose revenue maximizing prices $p_{in} = \frac{1}{2} v(t_{in}, \bar{t})$.

REMARK If Motives 2 or 3 were behind owner utility an alternative specification, as in Madden and Robinson (2012), would be of utility as a weighted average of consumer (fan) surplus and profits. Consumer surplus is;

$$CS_{in}(t_{in}, \bar{t}, p_{in}) = \tfrac{1}{2} \mu_i [v(t_{in}, \bar{t}) - p_{in}]^2$$

And utility would be;

$$U_{in} = \lambda_i CS_{in}(t_{in}, \bar{t}, p_{in}) - I_{in} + m_{in}$$

The optimal ticket price then satisfies;

$$p_{in} = \frac{1-\lambda_i}{2-\lambda_i} v(t_{in}, \bar{t})$$

For a profit-maximizer ($\lambda_i = 0$), the ticket price is the revenue maximizing price (half the maximum valuation, or choke price), as with Motive 1. But as λ_i increases prices are below the revenue maximizing level under Motives 2 or 3 when the owner cares directly about fan welfare, again as in Madden and Robinson (2012). However the change creates negligible qualitative changes to subsequent arguments, which remain valid under Motives 1,2 or 3.

It is useful to nest the standard win maximization within the range of owner behaviour captured by the model, and Madden (2012b) shows that this is possible if and only if *u* is quadratic and $\lambda_i = \hat{\lambda}_i \equiv \mu_i \frac{1-2\alpha}{8\alpha}$. Then owner *i* is a *benefactor* (positive injections) if $\lambda_i > \hat{\lambda}_i$, a *win-maximizer* (zero injections) if $\lambda_i = \hat{\lambda}_i$, a *profit-taker* (negative injections) if $0 < \lambda_i < \hat{\lambda}_i$, and a *profit-maximizer* if $\lambda_i = 0$ (as we already knew).

Equilibrium is a wage, a set of talent allocations to clubs and a set of ticket prices that clear the talent market and are consistent with optimal owner and fan decisions. In equilibrium, all clubs of the same type will make the same decisions, so $t_{in} = t_i$, $p_{in} = p_i$ say, $i = 1,2$, $n \in [0,1]$.

This is the model of Madden (2012b) from which laissez-faire equilibria are derived prior to the main results about the impact of BER on laissez-faire. Rather than reprise the results in detail, what follows picks out some main points, eventually focusing on some special cases that offer intuition and insight.

POINT 1:
In any league with some benefactor owners, imposition of BER will reduce desired aggregate player expenditure and (because of the upward sloping talent supply) will always reduce both the average league quality ($\bar{t}$), the wage (*w*) and so player salaries.

POINT 2:
Suppose a symmetric benefactor league where all fanbases are the same and all generosity parameters are the same. Under laissez-faire $t_1 = t_2$, and the league displays equal competitive balance. BER leaves the equal competitive balance intact, but, because of POINT 1, all team qualities decline. The choke price on demand, $v(t_i, \bar{t})$, decreases for both club types, so the linear ticket demand curves undergo a parallel downward shift. Ticket prices fall, but only by half the choke price reduction and consumer surplus triangles shrink; BER reduces all fan surpluses.

POINT 3:
Suppose now that the big market type 1 clubs are benefactor owned, whilst type 2 owners are profit maximizers. Under laissez-faire $t_1 > t_2$ as the big market clubs' greater gate revenue potential is augmented by benefactor injections, doubly ensuring that the competitive balance tilts in their favour. As ever BER reduces $\bar{t}$ and directly restricts type 1 owners' expenditure, ensuring that t_1 falls. There is no such direct

BER effect on small clubs, and, although t_2 may fall (below) it will do so by less than t_1; competitive balance improves, tilting back to some extent towards the small market clubs. For fans of big market clubs $v(t_1, \bar{t})$ certainly falls, and although their ticket prices fall (as in POINT 2) fan surplus declines; BER always makes big market club fans worse off in this kind of league. For the small market clubs, the fall in t_1 reduces their revenue and marginal revenue functions, larger reductions following when β is relatively large and the poorer quality big clubs impact a lot on the small club fans' willingness to pay for their home games against big market rivals. If ε is also relatively large then any average quality decline will be accompanied by only a small fall in the wage and equating wage to marginal revenue leads small clubs to reduce t_2. Then both t_1 and t_2 fall, and as in POINT 2, all fan surpluses fall. The improvement in competitive balance is irrelevant for welfare conclusions, trumped by the drop in team qualities. In fact, there is a general result *for any type of league*;

BER CONCLUSION 1: If $\varepsilon > 1/(2\beta)$ then BER causes all fan surpluses to fall.

POINT 4:
Continuing the line of POINT 3, it may be that (at lower β, ε) t_2 goes up after BER is imposed, in which case surplus accruing to fans of type 2 clubs goes up. But the surplus for type 1 fans will still go down, and as they are larger in number, certainly the majority of fans are worse off under BER, and aggregate fan surplus may go down.

POINT 5:
The effect of BER on owners is more difficult to trace generally. The following intuition is clear however, returning to the symmetric benefactor league of POINT 2. Take the extreme case of $\varepsilon = 0$ first. Under laissez-faire the owners arms race leads to spiralling expenditure on players, equilibrating with unchanged, equal competitive balance, but accompanied by no increase in team quality, merely a hike in player salaries. The laissez-faire arms race is bad for the owners, and BER turns this around, owners glad to be saved from the wage inflation with no quality return. When $\varepsilon = 0$ or small, owners may well be in favour of BER imposition. However at large enough ε this can turn around, the laissez-faire arms race now producing significant quality increases with little or no inflation of wages. As for players and (for the most part) fans, BER imposition may then be a bad thing for owners too.

BER GENERAL CONCLUSION: The imposition of BER in the professional league may (as in the amateur league) create a Pareto disimprovement for all parties; fans, players and owners. The imposition never leads to a Pareto improvement, always making players and at least some fans worse off, but possibly benefitting owners.

Because of the severe, post-Bosman competition for players between national leagues in European soccer, it has become conventional in the sports economics literature to assume that the elasticity of talent supply to any one league (e.g. the EPL) will be very large, in which case Pareto disimprovement would follow imposition of BER unilaterally there. For UEFA's pan-European jurisdiction, the elasticity would be smaller (but still non-zero for sure given the quality players importable from South

America), perhaps explaining why the European Club Association did support FFP despite its likely adverse effects on fans and average qualities.

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Conclusions for FFP as a regulatory device

Based on the arguments here, FFP (via its BER) will cause a reduction in talent expenditure in any jurisdiction on which it is imposed, which will surely lead to quality reductions on average and falls in player salaries, with the likely adverse effects on fans and the more nuanced effects on owners of the previous section. The expenditure reduction will be caused by the reduction in benefactor injections which are outlawed, but not by reductions in gate revenues, sponsorship income (if fair value), broadcasting income, merchandising etc., all of which remain expendable as "soccer-related" income. But the effect of constraining these alternative ways to inject funds would be exactly the same as those that follow from the truncation of benefactor injections; lower quality, player salaries, fan surpluses etc. Given this, any reason for picking on benefactor injections must be as a consequence of the way this kind of injection arrives in the jurisdiction, and not on its impact, which will, pound for pound of the expenditure, be the same for all. Features of the arrival process which may be of concern are inequality in the availability of a type of funding between clubs, and its uncertainty.

In my view a fundamental flaw in UEFA's FFP regulations is that they fail to explain what the concern is. Indeed, playing devil's advocate, it is not clear at all that there is any coherent case for the focus on benefactor injections rather than other sources. For example, compare (fair value) sponsorship income and benefactor injections. Both are quite unequal across clubs in their arrival pattern. Both may suddenly truncate or cease completely leaving clubs in need of another sponsor or benefactor. It is not clear whether the concern lies in the inequality or in the randomness of the arrival, and in either case it is not clear that the answer dictates preclusion of benefactor fund injections rather than sponsorship income, or indeed other forms of player expenditure funding.

The analysis of this paper suggests that precluding fund injections from any source may well have no credible welfare economics justification. Normally an economic evaluation of an industry regulatory measure would pay a lot of attention to impact on surpluses, particularly consumer surpluses. UEFA's 51 page FFP document offers just 4 lines on fans; clubs must appoint a Supporter Liaison Officer who "must collaborate with the security officer on safety and security-related matters", (p. 18). There is no mention throughout of the impact on ticket prices, for instance. Rather than an industry regulator document, it seems more credible to view the document as a report on how to ensure greater firm (club) profitability – a report from a cartel perhaps, a theme developed in a number of papers by Stefan Szymanski (e.g. Peeters and Szymanski (2013)).

Finally, as stressed at a number of points earlier, the economic activity of spectating or viewing a game has non-rival, non-excludable, public good features at amateur level becoming an excludable public good (perhaps subject to monopoly pricing) at professional levels. Private good welfare theorems do not apply, and the need for the firms in the industry to be profitable is not proven; indeed examples here and in

earlier papers suggest that provision in pursuit of a profit motive may not be socially desirable in the context.

Assuming NOPR does its job, there seems to be a case for at least a softening of BER to allow some benefactor fund injections, e.g. as gifts.

APPENDIX

This appendix presents a simple economic model in support of the text conclusions regarding the amateur league story.

Suppose there are just 2 identical villages that have village teams constituting the league, playing each other twice over the season once at home and once away. Initially all players are amateur, of homogeneous talent level (quality) normalised to 0. Both games in the league are therefore between 2 equally balanced teams, and in each village n people watch the home village team games, each deriving utility or surplus s. The games take place because the players derive a private benefit (normalised to 0) from participating, providing a pure public good for spectators generating (consumer) surplus per spectator of s in each village.

Suppose better quality players are brought in, leading to team talent levels $t_i > 0, 1 = 1,2.$ The game in village i is still watched (for simplicity) by the same n locals (the only ones with any interest in football), now deriving utility or surplus of $s + t_i^{\alpha} t_j^{\beta}$, where $\alpha > \beta > 0$ and $\alpha + \beta < ½$; the first restriction captures the fact that the locals would like their team to be better than the rival to some extent, and the second assumption is made for later concavity reasons. In each village the identical benefactors have quasi-linear utility functions $s + t_i^{\alpha} t_j^{\beta} - wt_i + m$ where w is the wage per unit of professional talent hired and m is benefactor wealth (large and non-binding); for simplicity assume that $w = 1.$ There is a symmetric benefactor Nash equilibrium in which the benefactors each hire professional talent of $t = \alpha^{\frac{1}{1-\alpha-\beta}}$. Surplus in each village for each non-benefactor spectator is now $s + \alpha^{\frac{\alpha+\beta}{1-\alpha-\beta}}$, and benefactor utility is $s + \alpha^{\frac{\alpha+\beta}{1-\alpha-\beta}}(1-\alpha)$. All benefactors and spectators are better off. And aggregate player surplus generated in the league is higher.

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