Competitive balance:
a spatio-temporal comparison

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1. Introduction

Competitive balance is a crucial issue for the whole of collective sports. Football is no exception. American professional sport is even structurally organised to avoid too great an imbalance between teams. From a commercial perspective, the basic assumption is that uncertainty favours spectacle and revenues.

The question of the balance of forces at play also has a moral dimension. It notably raises the issue of the equality of chance. A competitive balance allows a greater number of teams to attain victory, including those from countries or towns that are on the margins economically. However, competitive imbalance undermines the principle of uncertainty in sport.

The 40th Monthly Report of the CIES Football Observatory analyses competitive balance from a spatio-temporal perspective. The sample includes 24 European competitions over a period of ten seasons between 2008/09 and 2017/18. The first part focuses on the league rankings at the end of the regular season, while the second analyses the results per match.

Figure 1: study sample

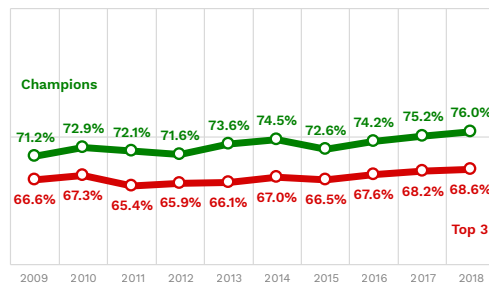|			
Big-5 leagues			
[ENG1]	Premier League (2008/09-2017/08)	(matches)	3'800
[ESP1]	La Liga (2008/09-2017/08)		3'800
[FRA1]	Ligue 1 (2008/09-2017/08)		3'799
[GER1]	Bundesliga (2008/09-2017/08)		3'060
[ITA1]	Serie A (2008/09-2017/08)		3'800
Other domestic leagues			
[AUT1]	Bundesliga (2008/09-2017/08)		1'800
[BEL1]	First Division A (2008/09-2017/08)		2'908
[DEN1]	Superliga (2008/09-2017/08)		2'056
[ENG2]	Championship (2008/09-2017/08)		5'520
[FIN1]	Veikkausliiga (2009-2018)		1'948
[FRA2]	Ligue 2 (2008/09-2017/08)		3'800
[GER2]	2. Bundesliga (2008/09-2017/08)		3'060
[ITA2]	Serie B (2008/09-2017/08)		4'620
[NED1]	Eredivisie (2008/09-2017/08)		3'060
[NOR1]	Eliteserien (2009-2018)		2'400
[POR1]	Primeira Liga (2008/09-2017/08)		2'664
[POL1]	Ekstraklasa (2008/09-2017/08)		2'680
[RUS1]	Premier League (2008/09-2017/08)		2'256
[SCO1]	Premiership (2008/09-2017/08)		2'280
[SUI1]	Super League (2008/09-2017/08)		1'782
[SWE1]	Allsvenskan (2009-2018)		2'399
[TUR1]	Süper Lig (2008/09-2017/08)		3'026
European competitions			
[UEFA CL]	Champions League (2008/09-2017/08)		1'250
[UEFA EL]	Europa League (2008/09-2017/08)		1'986
Total			69'754

2. Imbalances by season

Numerous approaches are possible to measure competitive balance over the course of a season. In order to maintain concision and simplicity, two indicators reflecting the level of domination of the top teams were retained for this report. They are the percentage of points achieved by the club having finished the regular season at the top of the rankings, respectively by the teams ranked in the top three places. The analysis excludes the eventual point penalties attributed to clubs.
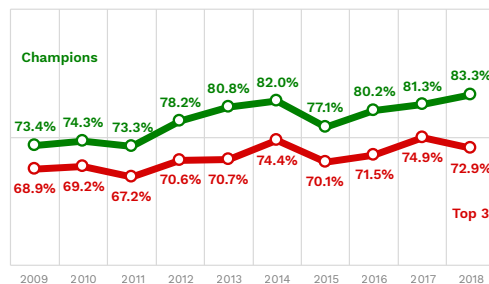
For the two indicators, the results show the trend towards a greater competitive imbalance. The percentage of points obtained by the champions increased from 72.3% during the first lustre taken into account to 74.5% during the latter. The average proportion of points for the three top ranked teams has also increased between the two periods: from 66.3% to 67.6%. In the two cases, a new record was set during the last season analysed.

The same analysis at the level of the big-5 European leagues shows that the level of imbalance is even more apparent and on the increase. During the 2017/18 season, big-5 leagues champions achieved a record of 83.3% of points. This proportion is 10% greater than that measured in 2008/09. The average percentage between the first and last lustre studied increased from 76.0% to 80.8%. The analysis for the clubs ranked in the top three places shows the same trend towards increasing imbalance.

Figure 2: % of points of the champions and the three top ranked clubs, 22 leagues

Figure 3: % of points of the champions and the top three ranked clubs, big-5

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The spatial comparison allows for the high-lighting of the differences between championships. At one extreme, the clubs having won the Portuguese top division obtained 84.4% of possible points. At the other, the champions of the French second division only achieved 64.4% of points. In 16 out of 22 leagues, the percentage of points obtained by champions went up between the first and last five seasons studied. The three greatest increases were recorded in the big-5 leagues: Ligue 1 (+10.0%), Serie A (+8.3%) and Bundesliga (+7.2%).

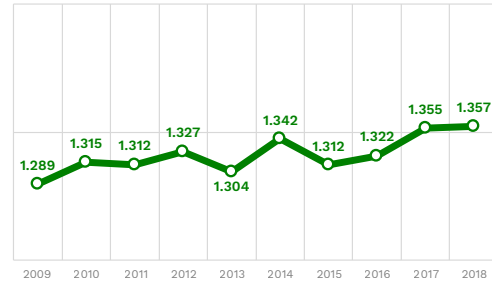**Figure 4: average % of points of champions, by league**

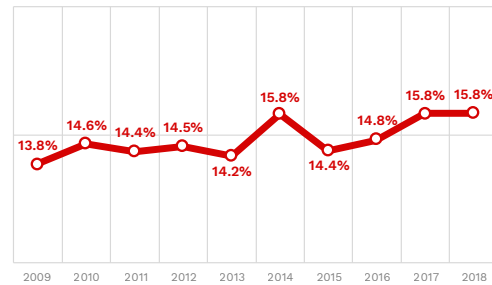|	Total		2009-13	2014-18	Evolution	
POR1	84.4%		85.1%	83.7%	-1.4%	●
ESP1	82.7%		84.6%	80.9%	-3.7%	● ●
SCO1	79.8%		77.0%	82.6%	+5.6%	● ●
GER1	79.3%		75.7%	82.9%	+7.2%	● ● ●
NED1	78.3%		76.7%	80.0%	+3.3%	● ●
ITA1	77.6%		73.5%	81.8%	+8.3%	● ● ●
ENG1	77.3%		76.1%	78.4%	+2.3%	●
FRA1	75.0%		70.0%	80.0%	+10.0%	● ● ●
TUR1	74.1%		73.4%	74.9%	+1.5%	●
BEL1	73.4%		75.7%	71.1%	-4.6%	●
NOR1	72.8%		71.1%	74.5%	+3.4%	● ●
SUI1	72.7%		70.8%	74.6%	+3.8%	● ●
DEN1	72.5%		71.9%	73.0%	+1.1%	●
RUS1	71.7%		71.1%	72.2%	+1.1%	●
SWE1	70.8%		69.3%	72.2%	+2.9%	●
FIN1	70.4%		70.7%	70.1%	-0.6%	●
AUT1	70.1%		67.8%	72.4%	+4.6%	● ●
GER2	67.7%		69.6%	65.9%	-3.7%	●
ENG2	67.7%		66.1%	69.3%	+3.2%	●
POL1	66.8%		68.4%	65.1%	-3.3%	●
ITA2	64.6%		63.8%	65.4%	+1.6%	●
FRA2	64.4%		61.6%	67.2%	+5.6%	● ●

3. Imbalances by match

Competitive balance can also be measured at match level. This kind of analysis has the advantage to allow for the inclusion of international competitions such as those organised by UEFA: the Champions League and the Europa League. In the two cases, only the matches played from the group stages on were included in the calculations.

The average goal gap per game and the percentage of matches where there was a goal difference of three or more are particularly pertinent indicators to measure competitive balance at match level. The results here also indicate a trend towards imbalance. The goal difference per match went up from 1.309 for the first five seasons studied to 1.338 for the last five. The percentage of matches with a goal difference of three or more also increased between the same periods: from 14.3% to 15.3%. In the two cases, the highest value was recorded during the last season studied.

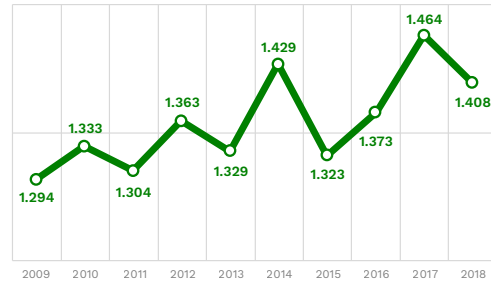**Figure 5: average goal difference per game, 24 competitions**

Figure 6: % of matches with a goal gap of three or more, 24 competitions
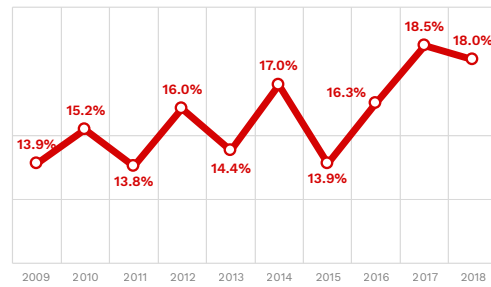
The same trend towards a greater imbalance was measured at the level of the five major European championships. While the values for the 2017/18 season are not the highest ever recorded, the averages between the first and the last of the two lustres studied are explicit. The goal difference per match has risen from 1.325 to 1.400 and the percentage of matches with a goal gap of three or more went up from 14.7% to 16.7%.

Figure 7: average goal difference per game, big-5

Figure 8: % of matches with a goal gap of three or more, big-5

Over the ten seasons studied, the biggest average goal difference per match was measured at the level of the UEFA Champions League: 1.58 goals. The premier competition of European football is also that presenting the highest proportion of matches which concluded with a goal gap of at least three: 21.0%. As for the average goal difference, Champions League is also where the trend towards imbalance is the most apparent between the first and last five seasons taken into account. For the second indicator, a greater tendency towards imbalance was only observed in the French Ligue 1.

Figure 9: average goal difference per game, by competition

	Total		2009-13	2014-18	Evolution	
UEFA CL	1.578		1.470	1.686	+0.216	● ● ●
NED1	1.554		1.616	1.492	-0.124	● ●
AUT1	1.502		1.483	1.521	+0.038	●
SUI1	1.452		1.473	1.432	-0.041	●
ESP1	1.452		1.429	1.474	+0.045	●
GER1	1.433		1.436	1.430	-0.006	●
ENG1	1.377		1.349	1.406	+0.057	●
BEL1	1.376		1.362	1.388	+0.026	●
SCO1	1.369		1.317	1.422	+0.105	● ●
NOR1	1.361		1.344	1.378	+0.034	●
SWE1	1.358		1.330	1.387	+0.057	●
UEFA EL	1.338		1.333	1.343	+0.010	●
DEN1	1.332		1.318	1.344	+0.026	●
FIN1	1.322		1.380	1.267	-0.113	● ●
POR1	1.320		1.260	1.370	+0.110	● ●
TUR1	1.310		1.275	1.344	+0.069	●
ITA1	1.299		1.247	1.351	+0.104	● ●
GER2	1.288		1.355	1.221	-0.134	● ●
RUS1	1.287		1.292	1.283	-0.009	●
POL1	1.266		1.241	1.286	+0.045	●
FRA1	1.263		1.184	1.343	+0.159	● ●
ENG2	1.227		1.221	1.233	+0.012	●
FRA2	1.123		1.094	1.151	+0.057	●
ITA2	1.098		1.112	1.084	-0.028	●

Figure 10: % of matches with a goal difference of three or more, by competition

	Total	Total	2009-13	2014-18	Evolution	
UEFA CL	21.0%		18.9%	23.2%	+4.3%	● ● ●
NED1	20.9%		22.5%	19.4%	-3.1%	● ● ●
AUT1	19.6%		20.0%	19.1%	-0.9%	●
SUI1	18.4%		18.6%	18.1%	-0.5%	●
ESP1	17.9%		17.4%	18.5%	+1.1%	●
GER1	17.7%		18.3%	17.1%	-1.2%	●
ENG1	16.5%		15.4%	17.5%	+2.1%	● ●
SWE1	16.0%		15.3%	16.8%	+1.5%	●
SCO1	16.0%		14.8%	17.2%	+2.4%	● ●
BEL1	15.5%		14.8%	16.1%	+1.3%	●
UEFA EL	15.3%		15.3%	15.3%	0.0%	=
DEN1	15.2%		14.6%	15.7%	+1.1%	●
NOR1	15.0%		14.2%	15.8%	+1.6%	●
FIN1	14.4%		15.6%	13.3%	-2.3%	● ●
GER2	14.3%		15.9%	12.6%	-3.3%	● ● ●
TUR1	14.0%		13.0%	15.0%	+2.0%	● ●
POR1	13.9%		11.8%	15.6%	+3.8%	● ● ●
POL1	13.7%		12.3%	14.9%	+2.6%	● ●
ITA1	13.7%		12.1%	15.3%	+3.2%	● ● ●
RUS1	13.7%		13.4%	13.9%	+0.5%	●
FRA1	13.1%		10.9%	15.3%	+4.4%	● ● ●
ENG2	12.4%		12.1%	12.6%	+0.5%	●
FRA2	10.1%		9.3%	10.9%	+1.6%	●
ITA2	10.0%		9.5%	10.5%	+1.0%	●

4. Conclusion

All of the indicators covered in this Report illustrate a trend towards a greater imbalance in European football. This is valid both over the course of the season and at match level. Although notable differences exist between competitions, this tendency is widespread. The level of imbalance is particularly important in the big-5 European championships and the Champions League. The differences observed mirror the economic divides between teams. In absolute terms, these gaps are much more marked in the richest leagues than in the others.

The concentration of resources goes hand in hand with the concentration of talents. Many teams and leagues are confined to a stepping-stone role for up and coming players. This permits the generation of profits on the transfer market. However, in an economic context that is more and more unequal, the financial compensations from these transactions are not sufficient to halt the increasing competitive imbalance. The present situation favours the wealthiest clubs. Each day, the latter increase their sporting, economic and even political domination.