Value of Competitive Balance in Sport Management – Insights from the "Big Five"

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Uncertainty of outcome hypothesis (UOH) has been often tested in sport economics (Woratschek & Griebel, 2020a, p. 2). Championship uncertainty is indicated by a balanced league with a great variety of champions (Owen, Ryan, & Weatherston, 2007, p. 290). Hence, an equal distribution of championships among the teams indicates competitive balance. Sport economists state that **competitive balance** leads to greater **commercial success** (Byers, Slack, & Parent, 2012, p. 11; Humphreys & Watanabe, 2012, pp. 18-19; Kringstad & Gerrard, 2007, pp. 18-19).

Measuring Competitive Balance

Competitive balance driven by championship uncertainty can be measured by the **distribution of different champions** over years. In our sample, we measured the degree of competitive balance of the so-called "Big Five" by counting the number of championships and showing its distribution among teams. The big five European football leagues are "England, Spain, Germany, Italy and France" (Poli & Rossi, 2012, p. 2).

Income Ranking[2]	League	Country	Gini Coefficient	Normalised Gini Coefficient
1	Premier League	England	0.84	0.88
2	La Liga	Spain	0.87	0.91
3	Bundesliga	Germany	0.88	0.92
4	Serie A	Italy	0.88	0.92
5	Ligue 1	France	0.78	0.82

Table 1: Gini Coefficients and Normalised Gini Coefficients for the "Big Five"

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[2] Ranking based on income consisting of TV, sponsoring and ticketing income in season 2017/2018.

The distribution can be measured using the **Gini (G)** or the **normalised Gini coefficient (G*).** G* takes a range between zero and one,[3] where zero means equal distribution and one means unequal distribution (Trapeznikova, 2019, pp. 6-7). G and G* of the "Big Five" are shown in Table 1, which indicate that these leagues are not balanced at all. Furthermore, the leagues are ranked based on their revenue consisting of TV, sponsoring and ticketing income (season 2017/2018) in Table 1 as well as in Figure 1 (Statista, 2020).

Figure 1 shows the **Lorenz curve**, which is a graphical illustration of the distribution over the past 20 years (1999/2000 – 2018/19). An equal distribution is displayed by a 45-degree line. The more the Lorenz curve deviates from this line, the more unequal the distribution is (Trapeznikova, 2019, pp. 5-7). If the UOH is true, championships should be equally distributed in leagues with the highest incomes. However, the graphs of all five leagues deviate strongly from the equal distribution line (Figure 1) and all the normalised Gini coefficients are above 0.82 (Table 1), which indicate that the **leagues with the highest income in Europe are not balanced at all.**
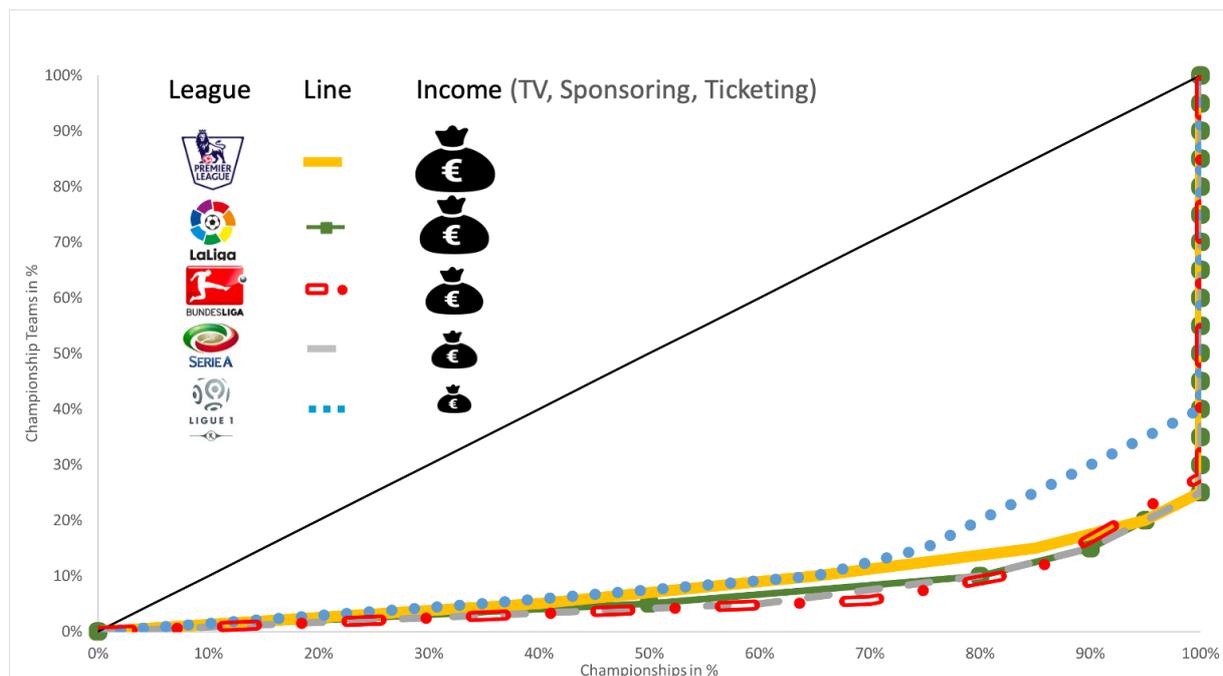

Figure 1: Lorenz curves for the European top five football leagues

Within the big five, there is also evidence against the importance of competitive balance for demand. For instance, Ligue 1 has the best degree of competitive balance, yet its income is the lowest. On the contrary, the German Bundesliga is the most imbalanced league but ranks among the top three regarding income (Figure 1). These observations suggest that competitive

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[3] G has to be normalised to ensure that it is in the range between zero and one (Raffinetti, Siletti, & Vernizzi, 2015, p. 1). The following connection applies: $G^*=n/(n-1)\cdot G$ and, $0 \leq G^* \leq 1$.

balance and uncertainty of outcome do not appear to be the central determinants for the demand for sport events and, as a consequence, for commercial success. Rather, **other influencing factors** need to be considered, e.g. BIRGing or superstar effects.

Balanced Leagues and Commercial Success

Sport management literature acknowledges the UOH, but also discusses superstar effects and BIRGing that increase the fan identification with a specific team if this team wins often (Woratschek & Griebel, 2020b, p. 2). BIRGing and superstar effects, which are acknowledged factors that influence demand for sport events, contradict the UOC. To illustrate, customers' (e.g. spectators' and fans') high identification leads to high loyalty (Woratschek & Griebel, 2020b, p. 2), while high loyal spectators and fans result in high commercial success (Heskett, Jones, Loveman, Sasser, & Schlesinger, 1994; Woratschek, Horbel, & Popp, 2019). Hence, demand for sport events may also be driven by an unbalanced league.

To put it in a nutshell:

1. **Competitive balance** is perceived as prerequisite for a league´s **commercial success** in sport economics and sport management literature.

2. Competitive balance within the "Big Five" European leagues is measured by looking at the **distribution of championships** over the last 20 years.

3. The Gini Coefficient as well as the Lorenz curve indicate a **high imbalance** of the leagues with the highest income in Europe.

4. Sport management literature discusses **BIRGing** and **superstar effects**, which both contradict the UOH and the concept of competitive balance.

5. Competitive balance and uncertainty of outcome are not the only determinants of demand for sport events. **Other influencing factors** need to be considered.

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