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ECONOMIC CONSEQUENCES OF THE UEFA CHAMPIONS LEAGUE FOR NATIONAL CHAMPIONSHIPS - THE CASE OF GERMANY

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Arne Feddersen

Economic Consequences of the UEFA Champions League for National Championships – The Case of Germany*

Abstract: Qualifying for and participating in the UEFA Champions League (UCL) is associated with generating large revenue flows. The fear of the football associations, some journalists and fans is that a permanent financial and sporting imbalance will be created between clubs qualifying for the UCL and the remaining clubs. This paper analyses the consequences of the UCL on the national championship in the German “Bundesliga”. The first section shows a review of economic and sporting trends in the Bundesliga for the 1980-1997 period. Also main changes in the domestic championship are reviewed. In second section an analysis of the UCL with (a) regard to competitive balance and (b) with regard to general balance will be undertaken. An interesting question is whether clubs qualifying for the UCL differ from the other teams. Especially the question whether competitive balance changes when there is an imbalance in the financial situation of the clubs (enforced by the UCL) will be analyzed. The third section describes the regulatory mechanisms of the German Bundesliga like revenue sharing and the licensing system.

Keywords: UEFA, Champions League, Competitive Balance, Bundesliga, Germany

JEL classification: L83

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1 Background

1.1 General Economic Trends in the Domestic Championship

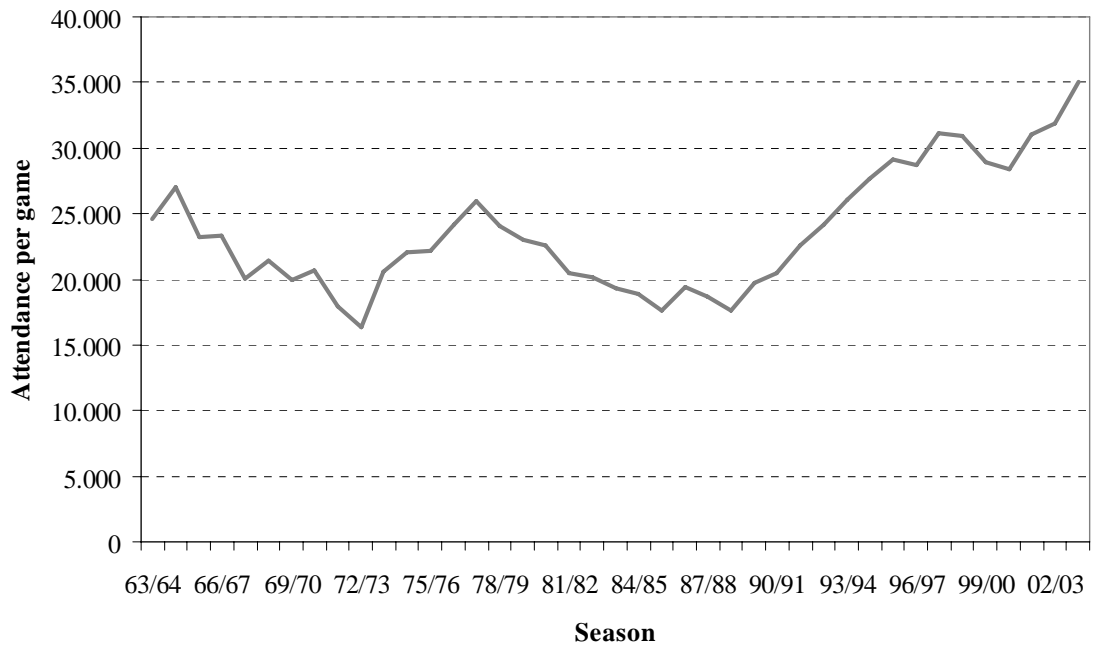
1.1.1 Review of Trends in the Domestic Championship for the 1980-1997 Period

This first section shows a review of economic and sporting trends in the Bundesliga for the 1980-1997 period. Also main changes in the domestic championship are reviewed. The Bundesliga started in August 1963. With exception of the first two seasons and the season 1991/92 always 18 teams participated. After

* This paper was presented at the UEFA/IASE seminar on: “The Economic Impact of the UEFA Champions League on National Football Economies” (May 2nd 2006, Nyon/Switzerland). I thank Bernd Frick and Declan Curran for their valuable help.

some success on international level¹ German football becomes very popular at the end of the 1970's and the beginning of the 1980's. This can be confirmed by a glance on the development of the attendance at Bundesliga matches (see Figure 1). A peak can be seen at the end of the 1970's with a beginning terrific decline up to mid 1980's. This decline can be awarded to the absence of sporting success of German football teams (especially on club level) and serious trouble with violence at the stadia (hooliganism). The comfort of the stadia build for the World Cup 1974 in Germany didn't be up to standard at this time. Also the so called novelty effect of these stadia was ebbing.²

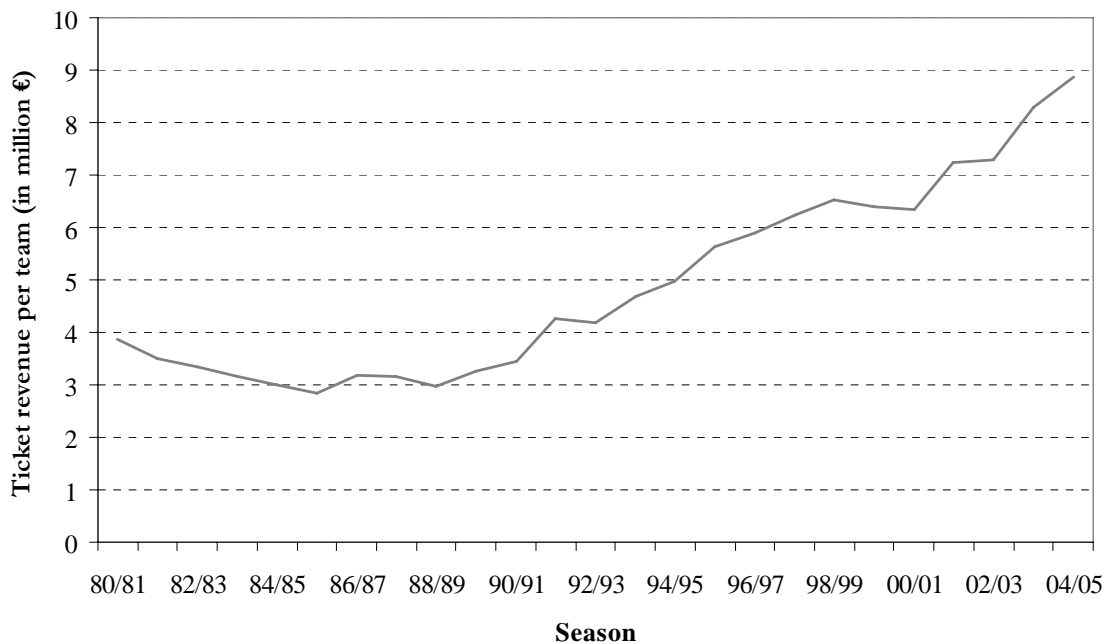
Fig. 1 Average Attendance per Game, 1963/64–2004/05



¹ The national team wins the EURO 1972 and 1980 as well as the World Cup 1974. It also got to the final in the World Cup 1982. Bayern Munich wins the European Champions Clubs' Cup three times between 1974 and 1976 and Hamburger SV wins the Cup Winners Cup in 1977 and the European Champions Clubs' Cup in 1983. Also Borussia Mönchengladbach wins the UEFA Cup in 1975 and 1979 as well as Eintracht Frankfurt did it in 1980.

² For further details see FEDDERSEN, MAENNIG, & BORCHERDING (2006).

Fig. 2 Average Ticket Revenue per Team (in million €), 1980/81–2004/05



After a small local maximum after the more successful World Cup 1986 (loosing the final) the attendance started a tremendous increase. This increase often is related to the fact that in 1988 the TV rights were sold to a private TV station for the first time in the history of German football. The reason may be an advertising effect coming from a modern and hip presentation of the matches in the high-light show “ran” on Saturday evening at the network “sat1”. This was a little bit surprising because most commentators expected a further decline due to the more appealing presentation of the matches (2006). Also the big success of the German national team at the World Cup 1990 in Italy had boosted the demand for tickets additionally. After a short period of decreasing attendance around the millennium average attendance grow to the highest amount ever: 37,806 spectators per game in season 2004/05. This is more than twice as much as attendance in season 1988/89 when the increase started. Inter alia, the newly big increase after season 2000/01 can be traced back to the novelty effect of the new stadia build in the run-up to the FIFA World Cup 2006.

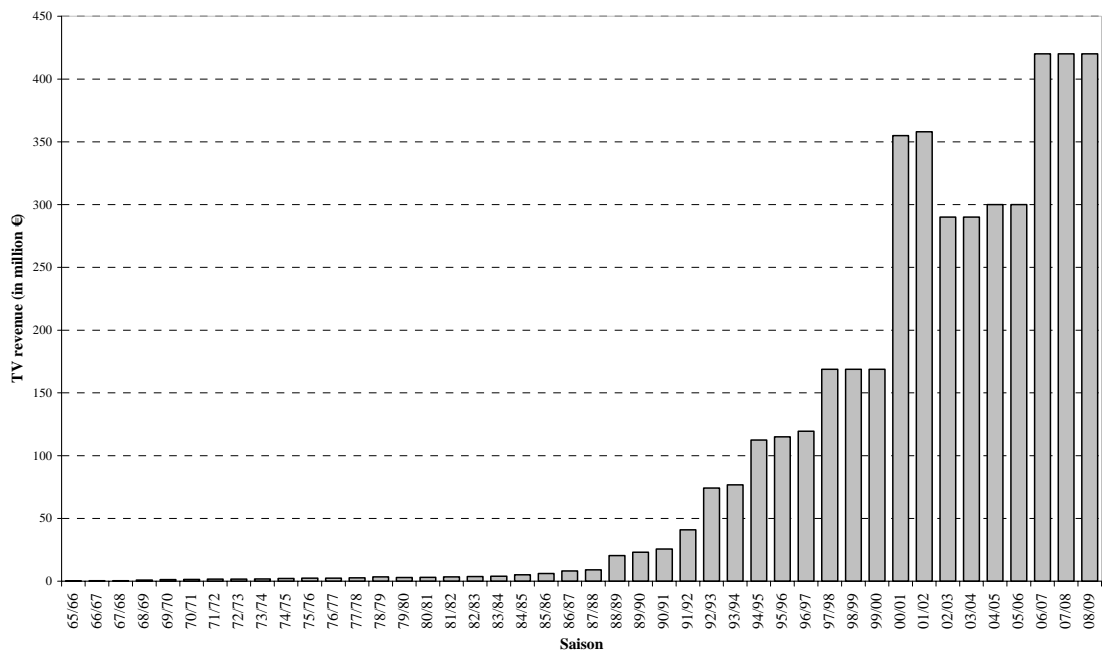
After a period of nearly constant real ticket revenue per team during the 1980’s, this kind of revenue increased tremendous. The starting point of this increases also coincided with the beginning of the sale of the TV rights to a private network

for the first time. After a short stagnation at the end of the 1990's ticket revenue increases again. This raise may be due to the construction of the new stadia for the FIFA World Cup 2006 in Germany. In addition to a possible novelty effect even capacity effects and/or revenue effects resulting from more or more expensive seats (VIP boxes, business seats incl. catering, higher seating capacity, lower standing capacity).³

The last main economic trend in the Bundesliga for the 1980-1997 period concerns the revenue resulting from the sale of the TV rights. TV revenue increased since liberalisation of the German TV market. Prior to the mid 1980's there was the monopoly on the supply side (DFB) and only two (friendly behaved) public networks on the demand side. Thus the growth rate of TV revenue wasn't high. The situation changed completely as private networks were allowed to enter the thitherto regulated German TV market. During the first half of the 1980-1997 period the growth rate was moderate. As the TV rights for the popular highlight show on Saturday evening (started between 18.00h and 18.30h) went from a public TV station (ARD) to a private TV station (RTL/UFA) in 1988 a first big increase can be observed (+122 %). Another big boost of TV revenue is due to start of pay TV in Germany in the early 1990's. In season 1991/92 the pay TV station "Premiere" begins with live coverage of league matches. Further driving power for the growth of the TV revenue results from digitalisation of TV and the possibility to offer pay per view offer through "Premiere" in the late 1990's.

³ For an distinction of these effects and an empirical analysis for the FIFA World Cup 2006 see FEDDERSEN, MAENNIG, & BORCHERDING (2006).

Fig. 3 TV Revenue (in million €), 1963/64–2008/09



Now some short remarks on the sporting trends for the period in consideration shall be made. From 1980 to 1997 one club was extremely successful: Bayern Munich. During the span of 18 seasons this club wins 8 times the national championship. But there were also other successful teams like Hamburger SV (two consecutive titles in the early 1980's) and Borussia Dortmund (two consecutive titles in the mid 1990's). The race for the championship often was close. For the Bundesliga no trend in competitive balance measured by the C5 ration and the C5 index of Competitive Balance (CB) can be found (see Figure 5 and Figure 6). Even a more detailed econometric analysis of competitive balance (e.g. standard deviation, ratio of standard deviation, concentration ratios, Herfindahl Hirschman Index) made by FEDDERSEN & MAENNIG (2005) revealed no significant trends in competitive balance for the Bundesliga.

Even some important other (non economic) changes occurred in the 1980-1997 period. First of all not until 1981/82 the Bundesliga 2 was organised in form of a single league. Before, there were parallel leagues. Furthermore the system of relegation and promotion changed. For parts of the period in consideration there

had been two teams relegated regularly to Bundesliga 2. Additionally the team that had finished Bundesliga in sixteenth place had to participate in a play off (two games, home and away) against the team that had finished Bundesliga 2 in third place. At least the three point rule was implemented in 1995/96.

1.1.2 Present Day (since 1997)

Prior to 1998 the German football clubs were classified as non-profit organizations.⁴ For this reason German Football clubs were not legally obliged to publish their accounts. At present only Borussia Dortmund, the only stock exchange listed German football club, must publish its accounts. Apart from some sporadic data available in newspapers, information on the financial situation of the individual clubs is rather limited. In particular, longitudinal data on individual clubs is still difficult to obtain (FRICK & PRINZ, 2006). Therefore the following section (1.1.2.1) is based on information published by the German Football League (DFL GmbH). In an annual publication aggregated data for the whole league from 1998/99 onwards is published. The subsequent section (1.1.2.2) is based on the annual report of the Borussia Dortmund GmbH & Co. KGaA (public limited company). The last section (1.1.2.3) considers data released by the UEFA.

1.1.2.1 For Elite Domestic Championships

To review the general economic trend in the Bundesliga it is necessary to analyse three main areas: structure of revenues, transfer activities and structure of expenditure. Due to the special characteristics of the transfer activities it is important to discuss them separately.

⁴ The General Meeting of the German Football Association (DFB) passed a resolution (“keynote paper”) on 24.10.1998 which created the legal preconditions to convert the professional player departments of football clubs into joint stock companies. Until 2004 only nine of the clubs changed their legal status (FRICK & PRINZ, 2006). The only football club to go one step further and risk registration on the stock market has been Borussia Dortmund (FEDDERSEN & MAENIG, 2004).

1.1.2.1.1 Structure of Revenue Excluding Transfers

The revenue of German football clubs can be categorised in accordance with the scheme used by the DFL for the purposes of their licensing procedure. The revenues are divided into six categories (match day, advertising/sponsoring, TV, merchandising, transfers, and other). Table 1 contains the different revenue categories, with the exception of the transfer revenue. The period under consideration runs from 1998/99 to 2004/05. Data before 1998/99 is not available from the DFL. Match day revenue include, for example, ticket revenue. The category “other” contains, among other items, revenue arising from subsidiary companies, revenue from youth and amateur levels, and donations.

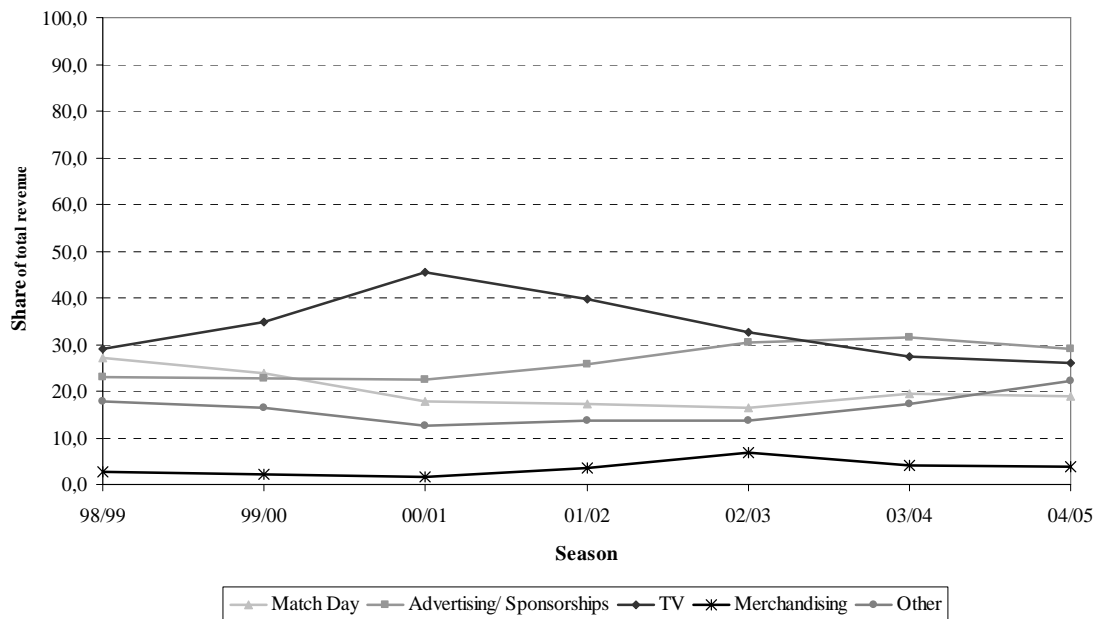
Tab. 1 Structure of Revenue, Excluding Transfers, in the Bundesliga, 1998/99-2004/05 (in million €)

Season	Total (excluding Transfers)	Match Day	Advertising/ Sponsorships	TV	Merchandising	Other
98/99	576.8	156.4	133.3	167.5	16.1	103.3
99/00	681.3	162.6	155.8	236.9	14.1	112.0
00/01	879.6	157.2	196.7	398.9	15.4	111.4
01/02	1,042.9	180.3	268.2	414.0	37.5	142.9
02/03	1,118.8	185.3	339.8	364.9	75.7	153.0
03/04	1,058.3	207.1	333.0	291.4	43.4	183.5
04/05	1,236.5	232.2	357.8	321.7	48.9	275.9

Source: DFL (2003, 2004, 2005, 2006).

In the second column of Table 1 the total revenue, excluding transfers, is given. The total revenue has grown from €577 million to €1,237 million during the seven seasons under consideration, corresponding to an increase of 114 %. The importance of the different revenue categories has also changed over time. This changing composition of total revenue is illustrated in Figure 3.

Fig. 4 The Composition of Revenue, Excluding Transfers, in the Bundesliga, 1998/99-2003/04 (in %)



The mostly important revenue category for the Bundesliga is that flowing from television rights (denoted as “TV” in Figure 3). This category’s revenue share has fluctuated somewhat over time, reaching a peak of 45 % in season 2000/01 and then falling back to 26 % in season 2004/05. After this 2000/01 peak TV revenue declined as a consequence of the insolvency of the Kirch group,⁵ who held the broadcasting rights between 1992 and 2002. In the aftermath of the so called “Kirch break up” TV revenues tumbled from over €400 million to approximately €290 million per season. The second most important revenue category is advertising and sponsorship. As illustrated in Figure 3, a substantial increase has taken place in this category, amounting to a 167 % rise over seven seasons. This is especially remarkable in light of the weak performance of the entire advertising market in Germany, which contracted by over 10 % in the same period (DFL, 2006, p. 30)

⁵ The Kirch group was running, inter alia, the TV stations Sat1 (free to air, presenting the high-light show) and Premiere (pay TV, broadcasting live).

1.1.2.1.2 Net Final Result of Transfer Activity

Over the entire seven season time span, transfer expenditure has exceeded transfer revenue. As a result the Bundesliga has built up a large deficit through transfer activities. This leads one to conclude that many high profile foreign players signed contracts over this period. This deficit grew until 2002/03, but after this season the deficit fell significantly. The reason for this may be an adjustment process in the aftermath of the Kirch break up. This is reflected in the fact that transfer expenditure has fallen from its peak in 2002/03 of almost €200 million to the present level of €140 million. Despite the Bosman ruling the transfer expenditure of the Bundesliga clubs is surprisingly high. The average transfer expenditure per club amounts €7.8 million.

Tab. 2 Transfer Activity of the Bundesliga (in million €)

	Transfer revenue	Transfer expenditure	Net final result of transfer activity
1998/99	79.488	97.632	-18.144
1999/00	44.64	113.094	-68.454
2000/01	80.64	145.566	-64.926
2001/02	81.702	173.214	-91.512
2002/03	29.898	192.816	-162.918
2003/04	31.95	159.354	-127.404
2004/05	47.844	140.328	-92.484

Source: DFL (2003, 2004, 2005, 2006).

1.1.2.1.3 Structure of Expenditure Excluding Transfers

Analogous to revenue, the expenditure of football clubs is also structured according to the scheme used in the DFL licensing procedure. The expenditure is divided into five categories (labour, youth and amateur teams, match day, transfers, and other). The monetary amounts within each of the different categories are given in table 3. The category “Labour” is further divided into sport referred expenditure and expenditure for the administration of the club. This category has only been organised in this way since 2001/02. As is the case with revenue, no expenditure

data is available for seasons prior to 1998/99. The category “other” contains, among other items, depreciation on fixed assets and expenditure from other sports departments (e.g. handball, tennis, and athletics).

Tab. 3 Structure of Expenditure Excluding Transfers in the Bundesliga, 1998/99-2004/05 (in million €)

Season	Total (excluding transfers)	Labour		Youth and amateur teams	Match day	Other
		Sport	Administration			
98/99	529.902	295.578	n.a.	23.526	63.468	147.330
99/00	654.048	352.044	n.a.	32.166	88.236	181.602
00/01	792.684	440.100	n.a.	33.894	106.866	211.824
01/02	943.110	515.808	37.458	34.776	139.644	215.424
02/03	996.660	504.792	51.678	33.948	159.570	246.672
03/04	1,002.636	492.300	54.738	43.992	165.762	245.844
04/05	1,087.686	495.882	53.478	40.572	195.894	301.860

Source: DFL (2003, 2004, 2005, 2006).

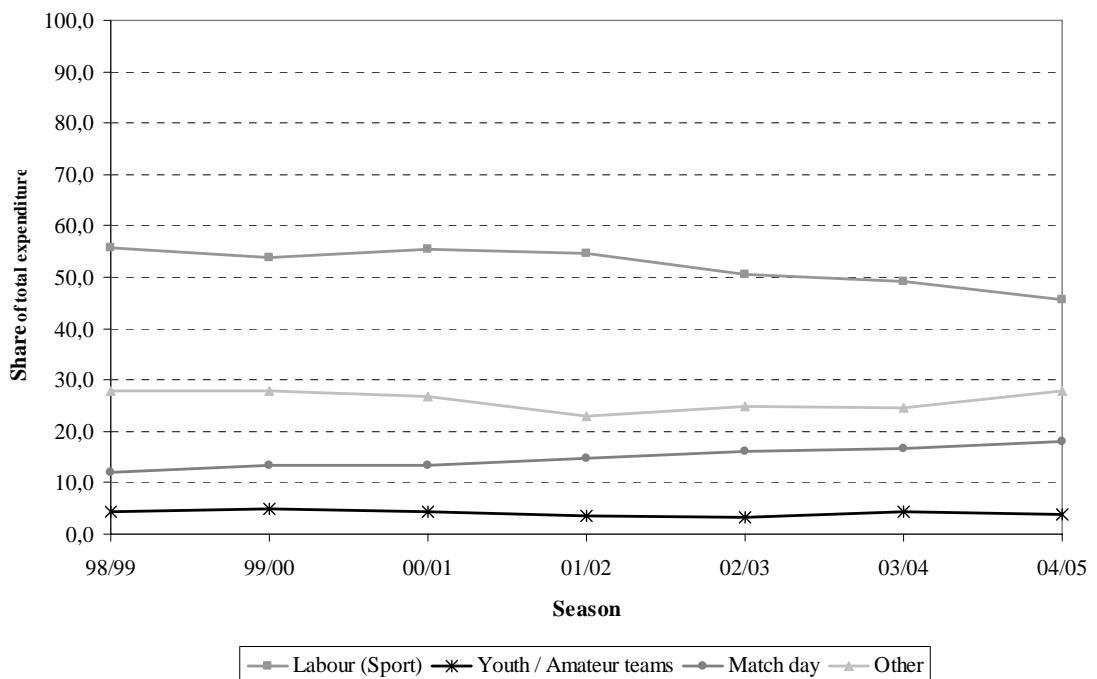
As illustrated in Table 3, labour expenditure is the largest expenditure category. The total expenditure (excluding transfers) has grown from €530 million to €1.1 billion over the period in question, representing an increase of 105%. One should remember that revenue increased by approximately 114% in the same period. The strong increase of match day expenditure is due to the completion of several new stadia (DFL, 2003, p. 12). Since Germany was chosen to host of the FIFA World Cup 2006 a boom in stadium building has occurred. Above €1.4 billion was invested in the 12 world cup stadia, as well as substantial investment in several other stadia in cities which will not be hosting a world cup game.⁶

In the aftermath of the Kirch break up Bundesliga clubs have reduced the share of the labour expenditure on total expenditure continuously. The highest share can be observed in 1998/99 (55.8 %) and 2000/01 (55.5 %). After 2000/01 labour ex-

⁶ For further information see FEDDERSEN, MAENNIG, & BORCHERDING (2006).

penditure has fallen back to 45.6 % in season 2004/05. It can also be seen from Figure 4 that the share of the match day expenditure has grown over the 1998-2005 period. The share of the expenditure on youth and amateur teams, however, has remained at a relatively low level of less than 5 % throughout the period in question.

Fig. 5 The Composition of Expenditures Excluding Transfers in the Bundesliga, 1998/99-2003/04 (in %)



1.1.2.2 For Clubs

In the next step the analysis undertaken in section (1.1.2.1) will be analogously executed for the top five clubs of the Bundesliga. The top five clubs will be defined through a synthesis of their results in the Bundesliga between 1993/94 and 2004/05. The decisive criterion will be the ranking of each club at the end of the twelve seasons from 1993/94 and 2004/05. The league position at the end of the particular seasons is given in Table 4. In this table the clubs participating in all consecutive seasons in the Bundesliga are shown. As it can be easily seen Bayern Munich has been the most successful team, finishing first or second in ten of the twelve seasons. This means an average ranking of 1.83. The gap to the second

team in this top five ranking (Borussia Dortmund) is tremendous. VfB Stuttgart is in fifth position with a small lead over Schalke 04. In the following analysis, only the first five teams contained in Table 4 will be considered.

Tab. 4 Top Seven Clubs of the Bundesliga, 1993/94-2004/05

No.	Club	04/ 05	03/ 04	02/ 03	01/ 02	00/ 01	99/ 00	98/ 99	97/ 98	96/ 97	95/ 86	94/ 95	93/ 94	Aver- age
1.	Bayern Munich	1	2	1	3	1	1	1	2	1	2	6	1	1.83
2.	Borussia Dortmund	7	6	3	1	3	11	4	10	3	1	1	4	4.50
3.	Bayer 04 Leverkusen	6	3	15	2	4	2	2	3	2	14	7	3	5.25
4.	Werder Bremen	3	1	6	6	7	9	13	7	8	9	2	8	6.58
5.	VfB Stuttgart	5	4	2	8	15	8	11	4	4	10	12	7	7.50
6.	Schalke 04	2	7	7	5	2	13	10	5	12	3	11	14	7.58
7.	Hamburger SV	8	8	4	11	13	3	7	9	13	5	13	12	8.83

Source: DFB (2006).

1.1.2.2.1 Structure of Revenue, Excluding Transfers

As described previously, information on the financial situation of the individual clubs is rather limited and always incomplete. For this reason the following sections (1.1.2.2.1) and (1.1.2.2.2) are based on the data from the annual reports of Borussia Dortmund. The data for this club can be regarded as representative of the five clubs under consideration. Of course, inferences from this approach should be drawn with care as Borussia Dortmund is the only German club listed on the stock exchange. It must be pointed out that the displayed revenue in Table 5 is not only revenue from the Bundesliga. Revenue from European cup competitions is also included. Further differences also exist, for example, in the unique

fan drawing potential of this club.⁷ The design of Table 5 is chosen in an analogous fashion to that of the fore-mentioned DFL licensing procedure. Obviously the substantial decline in TV revenues after the Kirch break up can be seen in the data of an individual club. In the wake of that debacle, sponsoring revenue has become the most important revenue category. The share of this revenue category accounted for 36.1 % of total revenue in 04/05. Even “ticket sales” contributes a relevant share, accounting for approximately 24 %. The total ticket revenue appears to be relatively constant over time, with an average figure of €17.6 million.

Tab. 5 Structure of Revenue, Excluding Transfers, for Borussia Dortmund (in million €)

Revenue	04/05	03/04	02/03	01/02	00/01	99/00
Ticketing	17.51	20.30	17.90	17.84	13.83	17.97
Sponsoring	26.42	25.69	44.91	27.95	13.23	26.05
TV	14.88	19.33	49.92	45.98	19.34	35.00
Merchandising	12.91	14.36	11.28	8.82	5.21	9.70
Other	1.51	2.21	0.10	0.53	0.11	0.01
Total (excluding transfers)	73.22	81.89	124.10	101.12	51.72	88.74

Source: BORUSSIA DORTMUND (2001, 2002, 2003, 2004, 2005).

1.1.2.2.2 Net Final Result of Transfer Activity

As discussed earlier, the net result of transfer activity in the Bundesliga has been negative throughout the period under consideration. Now the net final result of transfer activity of the top five clubs will be analysed. The data is available from the internet service “www.transfermarkt.de”. There one can find listed all the individual transfers of Bundesliga clubs from 1990/91 to the present. The transfers are documented in terms of old club, new club, and transfer fee. The data is

⁷ The average attendance per league game is one of the highest in European football. In season 03/04 the average attendance amounts 78,808 (capacity utilisation of 93 %). This was remarkably higher than the average attendance of any other European club as e.g. the second placed Real Madrid (70,990) or the third placed Manchester United (67,646).

authentic for the last few seasons but rather incomplete for seasons before 1995/96. Thus only data for transfers occurring after this point in time are included in the following analysis. In this section general economic trends in the Bundesliga since 1997 will be considered.

Not all of the top five clubs exhibit just negative net final results of transfer activity. For example Werder Bremen, as a club with a small regional market, has incurred very small deficits of transfer activity or even a noticeable surplus for some of the seasons considered in Table 6. Only Bayern Munich, the most successful Bundesliga team and the club with the highest economic potential, has always endured a negative net final result of his transfer activity. The substantial deficits of Borussia Dortmund between 2001/02 and 2003/04 are due to the IPO on 31st October 2000.⁸ In 2004/05 Borussia Dortmund went in financial trouble and narrowly avoided insolvency in March 2005. After this point, the deficit of transfer activity was immediately transformed into a large surplus.⁹

⁸ Some of the transfers in question here are those of Marcio Amoroso (€25 million), Thomas Rosicky (€14.5 million), Jan Koller (€10.7 million), Sunday Oliseh (€7.5 million) Thorsten Frings (€8.5 million), Henrique Ewerthon de Souza (€7.1 million). These transfers were completed in the four seasons after the IPO.

⁹ The consolidation will be continued in the coming seasons. In season 2005/06 a surplus of €2.5 million will be realised. Further steps towards the consolidations will be, inter alia, the probable transfer of Thomas Rosicky to Atletico Madrid or Juventus Torino after season 05/06. The fee for this transfer will be around €10 million.

Tab. 6 Net final Result of Transfer Activity for Top Five Clubs (in million €)

Season	Bayern Munich	Borussia Dortmund	Bayer 04 Leverkusen	Werder Bremen	VfB Stuttgart
97/98	-9,23	9,60	6,80	-5,75	2,50
98/99	-3,28	-6,93	1,50	-1,58	2,35
99/00	-14,20	-15,60	-15,67	-0,85	0,70
00/01	-12,65	-26,40	-1,90	4,25	-5,38
01/02	-9,85	-25,28	2,20	-4,82	-2,40
02/03	-23,00	-9,65	-11,45	9,25	-0,15
03/04	-21,50	-12,87	0,30	-0,24	-7,70
04/05	-24,72	10,20	11,99	-2,55	3,60

Source: URL: www.transfermarkt.de.

1.1.2.2.3 Structure of Expenditure

Availability of information on the expenditure of individual Bundesliga clubs is also quite limited. For this reason Borussia Dortmund will again be considered as a representative club. In the annual report of Borussia Dortmund there are eight expenditure categories. These categories (excluding transfers) are displayed in Table 7. An interesting category is that denoted as “Labour”. The level of the labour expenditure grew at a tremendous rate up to season 2002/03. After the fore-mentioned financial problems experienced by Borussia Dortmund this rapid growth of labour expenditure abated immediately and was in fact slashed by one third, with further consolidation planned. Moreover, match day expenditure has grown over the period in question. An increase of approximately €18 million can be detected in this expenditure category. This increase is due to the stepwise extension of the “Westfalen Stadion” (now named “Signal Iduna Park”) from a capacity of 42,800 (1994/95) to a capacity of 83,000 (2002/03).

Tab. 7 Structure of Expenditure Excluding Transfers for Borussia Dortmund (in million €)


























Expenditure	04/05	03/04	02/03	01/02	00/01	99/00
Material	4.60	2.41	6.55	4.58	1.40	1.11
Labour	45.92	55.10	67.92	66.86	52.34	47.32
Match day	26.60	30.26	22.53	14.98	10.16	8.86
Advertising	15.01	14.28	19.16	16.09	11.08	7.49
Administration	11.73	8.89	8.42	13.48	16.50	6.24
Other	29.74	4.26	10.09	11.62	1.76	2.34
Total (excluding transfers)	133.61	115.20	134.67	112.65	93.23	73.36

Source: BORUSSIA DORTMUND (2001, 2002, 2003, 2004, 2005).

1.1.2.3 UCL Revenue for the Bundesliga

To complete the illustration of the general economic trends in the Bundesliga it now remains to analyse UCL revenue and its distribution. This revenue flow is of immense importance to the Bundesliga due, quite simply, to the vast sums of money involved.

Tab. 8 UCL Participation from 1996/97 to 2004/05

Club	96/ 97	97/ 98	99/ 98	99/ 00	00/ 01	01/ 02	02/ 03	03/ 04	04/ 05	Total
FC Bayern München										8
Bayer 04 Leverkusen										6
Borussia Dortmund										5
Schalke 04										1
SV Werder Bremen										1
1. FC Kaiserslautern										1
VfB Stuttgart										1
Hertha BSC										1
Hamburger SV										1

Source: DFL (2006, pp. 57-58).

The period under consideration here spans from 1996/97 to 2004/05. During this period nine different Bundesliga clubs qualified for the UCL. Bayern Munich took part in the competition eight times out of a possible nine, followed by Bayer Leverkusen (6 times) and Borussia Dortmund (5 times). Two clubs have won the UCL: Borussia Dortmund (96/97) and Bayern Munich (00/01). The German clubs also lost two finals during the considered period: Bayern Munich against Manchester United (98/99) and Bayer Leverkusen against Real Madrid (01/02). A further six teams only participated once in the UCL. On one occasion the team which finished in third place failed to qualify for the UCL in the qualification round and then had to enter the UEFA cup (Borussia Dortmund 03/04).

Bayern Munich received the most money over the seven seasons, with a total amount of about €173 million or €24.7 million per season. In second place of this ranking stands Bayer Leverkusen, with more than €105 million or more than €15 million per season. The largest amount of UCL revenue secured in a single season was also achieved by Bayern Munich. In the season of their UCL victory (2000/01) they amassed almost €47 million. The lowest revenue from participating in the UCL received 1. FC Kaiserslautern in season 1998/99. Over the whole period the total UCL revenue equals 6.4 % of the total overall revenue (excluding transfers) of the Bundesliga. This share is surprisingly small – football fans would expect that the impact of the UCL on the total revenue would be very significant. However, for a more differentiated analysis the total amount of the UCL revenue must not be considered in isolation. The distribution of UCL revenue among the individual teams must also be analysed. When such a differentiated analysis is undertaken the apprehensions of fans and league officials is found to be confirmed. The distribution is indeed skewed. This imbalance can be captured neatly by the Gini coefficient, which stands at 0.529 among the teams qualified for the UCL but 0.764 among the 18 teams of the Bundesliga.

Tab. 9 UCL Revenues for the Period 98/99 to 04/05 (in million €)

Club	98/ 99	99/ 00	00/ 01	01/ 02	02/ 03	03/ 04	04/ 05	Total
FC Bayern Munich	12.601	29.223	46.969	31.987	14.669	19.094	18.387	172.929
Bayer 04 Leverkusen	–	12.887	18.415	33.869	26.684	–	13.479	105.334
Borussia Dortmund	–	9.715	–	13.061	30.679	–	–	53.455
Schalke 04	–	–	–	17.168	–	–	–	17.168
SV Werder Bremen	–	–	–	–	–	–	17.081	17.081
1. FC Kaiserslautern	8.926	–	–	–	–	–	–	8.926
VfB Stuttgart	–	–	–	–	–	18.039	–	18.039
Hertha BSC	–	15.134	–	–	–	–	–	15.134
Hamburger SV	–	–	14.659	–	–	–	–	14.659

Source: UEFA (2000, 2001, 2002, 2003, 2004, 2005).

1.2 Changes in Competitive Balance

1.2.1 Rankings

If the rankings at the end of the last 15 seasons are considered, one club appears to be dominant: Bayern Munich. This club has reached the top three 13 times and top two twelve times. The average ranking of Bayern Munich is 2.4. The next successful club, Borussia Dortmund, has an average ranking of 4.7. Bayern Munich has won the championship seven times over the last 15 seasons. At first glance the Bundesliga appears to be extremely unbalanced. But from another point of view Bayern Munich has not won the championship on eight occasions over this same period. Some other teams have achieved Bundesliga success, for example, Borussia Dortmund (three times), Werder Bremen (twice), 1. FC Kaiserslautern (twice), and VfB Stuttgart (once). There are also a number of teams which, while without actually winning the championship, have been successful nonetheless – such as Bayer Leverkusen with an average ranking of 5.5. This club has finished seven times in the top three. In most seasons the race for the championship

was open until the very end of the season. It is evident from the nature of this Bundesliga ranking that more analytical tools such as measures of competitive balance can be usefully constructed to undertake this analysis.

Tab. 10 Rankings for Individual Bundesliga Clubs, 90/91 to 04/05

Season	90/ 91	91/ 92	92/ 93	93/ 94	94/ 95	95/ 96	96/ 97	97/ 98	98/ 99	99/ 00	00/ 01	01/ 02	02/ 03	03/ 04	04/ 05	Mean
Bayern Munich	2	10	2	1	6	2	1	2	1	1	1	3	1	2	1	2,40
Borussia Dortmund	10	2	4	4	1	1	3	10	4	11	3	1	3	6	7	4,67
Bayer Leverkusen	8	6	5	3	7	14	2	3	2	2	4	2	15	3	6	5,47
Werder Bremen	3	9	1	8	2	9	8	7	13	9	7	6	6	1	3	6,13
VfB Stuttgart	6	1	7	7	12	10	4	4	11	8	15	8	2	4	5	6,93
Kaisers- lautern	1	5	8	2	4	16	19	1	5	5	8	7	14	15	12	8,13
Schalke 04	19	11	10	14	11	3	12	5	10	13	2	5	7	7	2	8,73
Hamburger SV	5	12	11	12	13	5	13	9	7	3	13	11	4	8	8	8,93
Hertha BSC Berlin	18	19	19	19	19	19	19	11	3	6	5	4	5	10	4	12,00
Borussia M'gladbach	9	13	9	10	5	4	11	15	18	19	19	12	12	12	15	12,20
TSV 1860 Munich	19	19	19	19	14	8	7	13	9	4	11	9	10	16	19	13,07
Eintracht Frankfurt	4	3	3	5	9	17	19	19	15	14	17	19	19	17	19	13,27
Karlsruher SC	13	8	6	6	8	7	6	16	19	19	19	19	19	19	19	13,53
1. FC Cologne	7	4	12	11	10	12	10	17	19	19	10	17	19	18	19	13,60
VfL Wolfsburg	19	19	19	19	19	19	19	14	6	7	9	10	8	11	9	13,80
Hansa Rostock	19	18	19	19	19	6	15	6	14	15	12	14	13	9	17	14,33
SC Freiburg	19	19	19	15	3	11	17	19	12	12	6	16	19	13	18	14,53
VfL Bochum	14	15	16	19	16	19	5	12	17	19	18	19	9	5	16	14,60
MSV Duisburg	19	19	19	9	17	19	9	8	8	18	19	19	19	19	19	16,00
1. FC Nuremberg	15	7	13	16	19	19	19	19	16	19	19	15	17	19	14	16,40

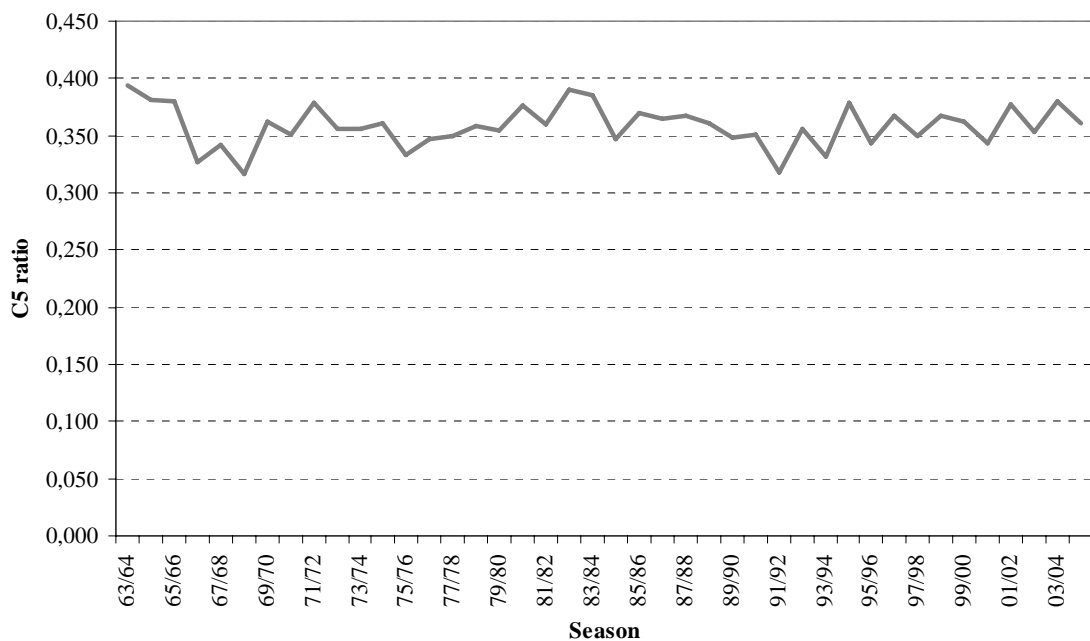
Source: DFB (2006).

1.2.2 Calculation of C5 Ratio and C5 Index of Competitive Balance

Competitive balance can be measured in a number of ways. For this purpose the C_m ratio can be used. This measure is well known as a tool for assessing concentration in industrial markets. The concentration ratio C_m captures the summed market shares of the m biggest companies. So the ratio C5 shows the cumulated market shares of the top five clubs of the football league in question. The choice of setting m equal to five can be justified by the structure of the sporting competition. Teams that finish in one of these top five positions qualify for one of the UEFA European cup competitions. So this measure shows whether imbalances between European cup participants and the other teams do in fact arise or even increase. In Figure 5 the development of the C5 ratio is displayed.

$$C_m = \sum_{i=1}^m p_i, \text{ with } p_i = \frac{x_i}{\sum_{i=1}^n x_i} \tag{1}$$

Fig. 6 The Development of the C5 Ratio, 1963/64-2004/05



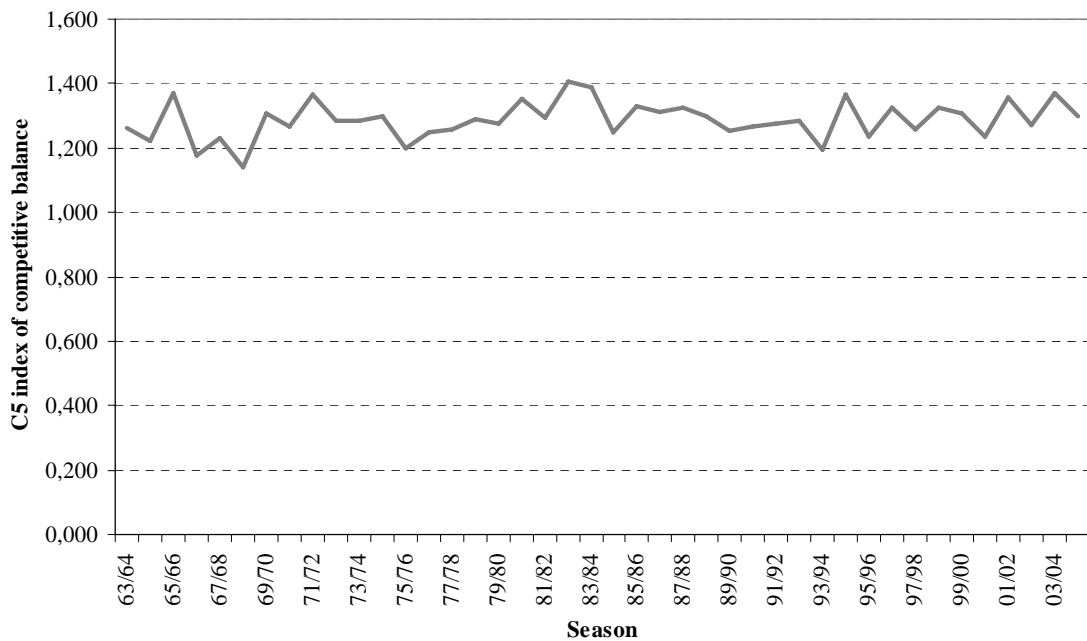
Unfortunately the C5 ratio is affected by the number of teams playing in a given league. This measure is decreasing with additional teams. For the German

Bundesliga this is not a significant problem, as the number of teams is near stable during the 42 seasons of the Bundesliga’s existence.¹⁰ However, the relevance of this problem does arise if one wishes to compare leagues with different numbers of participants. A convenient solution is to calculate the so called “C5 index of competitive balance”.

$$\text{C5 index of CB} = \frac{\text{C5}}{5/N} \tag{2}$$

The C5 index consists of both the concentration ratio mentioned earlier and N, the number of teams playing in the league during the considered season. Not surprisingly the correlation between the C5 ratio and the C5 index of CB is high for the Bundesliga (0.871). Figure 6 shows the development of the C5 index of CB.

Fig. 7 The Development of the C5 Index of Competitive Balance, 1963/64-2004/05



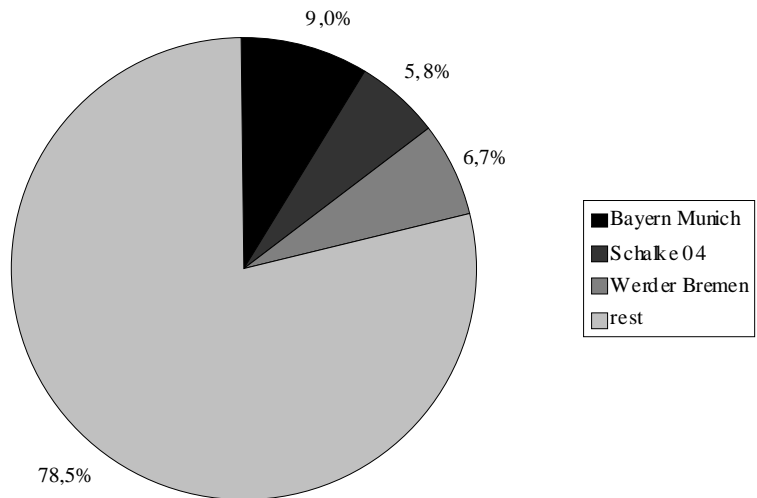
¹⁰ The Bundesliga has usually consisted of 18 teams. Only for the first two seasons of its existence were there 16 teams. The season 1991/92 was played with 20 teams due to German unification.

The insights captured by Figures 3 and 4 lead one to conclude that there is no distinct trend in the competitive balance of the Bundesliga. The econometric analysis of FEDDERSEN (2008) showed that there is indeed no significant trend. Thus it can be seen the establishment of the UCL in the early 1990's did not lead to changes in competitive balance of the Bundesliga.

1.2.3 Proportion of Clubs Qualifying for UCL

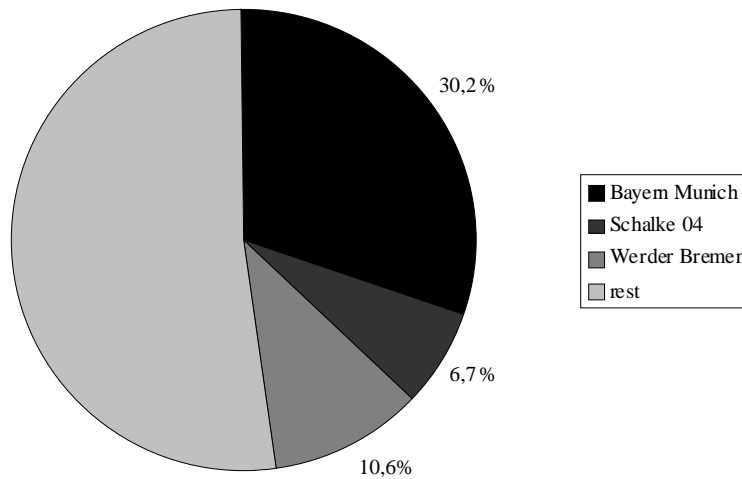
Figure 7 shows the individual clubs proportion of total Bundesliga club budgets for season 2004/05. The budget of Germany's most successful club (Bayern Munich; finished first) was the largest of all the Bundesliga clubs. But the distance to the club with the second highest budget (Hertha BSC Berlin; finished fourth) was quite small (9.0 % to 8.2 %). The lowest share was observed for Arminia Bielefeld with 3.3 %. The UCL clubs command an average share of 7.1 % while the runners up (from fourth to ninth place) possess an average share of 6.7 %. From tenth place down, however, there was a remarkable break in club budgets. The average share of the remaining nine teams correspond to 4.3 % of total Bundesliga club budgets. It can be seen that the budget of the UCL teams is not evidently higher than the budget of the runners up. So, crucially, the break is not determined after third place.

Fig. 8 Proportion of the budget of clubs qualifying for UCL for season 04/05



Analogously, a study of the growing imbalance in transfer expenditure can be undertaken. In light of this, the relation between UCL participation and transfer expenditure should be analysed. Sometimes football associations worry about a growing gap in talent distribution among the teams of their leagues due to excessive transfer activities of the top clubs. A glance at Figure 8 may confirm this impression. The cumulative share of transfer expenditure of the three clubs qualified for the UCL in season 2004/05 accounted for approximately 50 %. The biggest share belongs to Bayern Munich with 30.2 %. Taking this season as an example, it can be shown that evidence exists of a large difference between transfer expenditure of teams qualifying for UCL and other teams. Figure 8 illustrates the development of the relative transfer expenditure. Not surprisingly, the transfer expenditure of UCL clubs is higher than that of teams outside of the UCL qualification positions. For the period 1996/97 to 2004/05 the transfer expenditure of these teams was, at least, approximately twice as much as the league average. Thus the large difference in existing transfer expenditure patterns can be confirmed. However with respect to the trends of the period in question there is no evidence of this imbalance growing in size. On the contrary, a slight decline in relative transfer expenditure of UCL clubs can be observed from this data.

Fig. 9 Proportion of the Transfer Expenditure of Clubs Qualifying for UCL in Season 04/05



2 Analysis of Impact of UCL on the Domestic Championship

In this section an analysis of the UCL with (a) regard to competitive balance and (b) with regard to general balance will be undertaken. An interesting question is whether clubs qualifying for the UCL differ from the other teams. There are three main areas which should be considered in greater detail: the budget, the transfers and the share of TV rights.

As discussed earlier, qualifying for and participating in UCL is associated with generating large revenue flows. The fear of the football associations, some journalists and fans is that a permanent financial and sporting imbalance will be created between clubs qualifying for the UCL and the remaining clubs. To check whether this fear is justified or not three kinds of relationships will be empirically tested: tests of the relationship between 1) competitive balance and budget, transfers, TV rights, 2) between qualification for UCL and budget and 3) qualification for UCL and transfers will be conducted.

2.1.1 Test of Relationship between Competitive Balance and Budget, Transfers, TV Rights

This section tests whether competitive balance changes when there is an imbalance in the financial situation of the clubs. The financial situation is embodied in (a) the budget, (b) the transfer expenditure, and (c) the TV revenue. To measure the imbalance of the financial indicators their Gini coefficients were calculated for each season. To analyse the fore-mentioned relationship the trends of the Gini coefficients and competitive balance over the seasons are examined. In the first step the correlation between the Gini coefficients on the one hand and the measures of competitive balance (C5 and C5 index of CB) is computed. The results, which are displayed in Table 10, show very small values for correlation coefficients. Furthermore none of the correlation coefficients is significant at the 0.05 level.

To test causality, as distinct from correlation, the Granger test can be conducted. The results of the granger causality tests are given in Table 11. None of the test statistics are significant; at least at the 10 % level. This applies for the C5 ratio as well as for the C5 index of CB. It can be concluded therefore that no causal relationship exists between competitive balance and the financial balance and vice versa.

Tab. 11 Correlation between Competitive Balance and Budget, Transfers, TV Rights

	C5	C5 index of CB	n
GINI _{budget}	-0.079 (-0.345)	-0.027 (-0.118)	21
GINI _{transfer}	-0.268 (-0.787)	-0.275 (-0.809)	10
TV rights	0.238 (1.068)	0.185 (0.821)	21

Notes: t-statistics in brackets (one side); critical values $t_{n-2; 0,05}$ are 1.860 (n=10) and 1.729 (n=21).

Tab. 12 Granger Causality between Competitive Balance and Budget, Transfers, TV Rights

		C5	C5 index of CB
$GINI_{budget}$	\Rightarrow CB	0.005 (0.943)	0.053 (0.820)
CB	\Rightarrow $GINI_{budget}$	0.375 (0.548)	0.052 (0.822)
$GINI_{transfer}$	\Rightarrow CB	0.112 (0.749)	0.089 (0.775)
CB	\Rightarrow $GINI_{transfer}$	0.192 (0.677)	0.211 (0.662)
TV rights	\Rightarrow CB	2.771 (0.113)	2.589 (0.125)
CB	\Rightarrow TV rights	0.262 (0.615)	0.198 (0.662)

Notes: p-values in brackets; lag=1.

2.1.2 Test of Relationship between Qualification for UCL and Budget

Although there is no obvious relationship between competitive balance and financial balance, it should be analysed whether qualification for UCL affects the budget of Bundesliga teams, and vice versa. The supposed relationship between qualification for UCL and the budget size of these clubs is displayed in Figure 9. There the relative budget of all Bundesliga clubs for the 24 season in question is given on the y-axis and the ranking on the x-axis. The scatter plot exhibits a visual coherence. A linear regression yields a negative relation. The corresponding R^2 has a value of merely 0.36. Thus the quality of the relationship isn't very high. It also can be seen that the bandwidth of the budget which the champion has commanded is wide.

Even a study of the relative budget trends of teams qualifying for the UCL and the other teams cannot confirm the thesis of growing financial imbalance (see Figure 10). It can be seen that the difference between the UCL clubs and the others was more pronounced in the mid 1980's. From the early 1990's, when the UCL was established, the proportion of the relative budget has been almost constant. It is

shown clearly that no trend is present for the period 1992/93 to 2004/05. Thus no evidence for the thesis presented above could be found.

Fig. 10 Annual Relative Budget and Ranking, 1981/82 - 2004/05

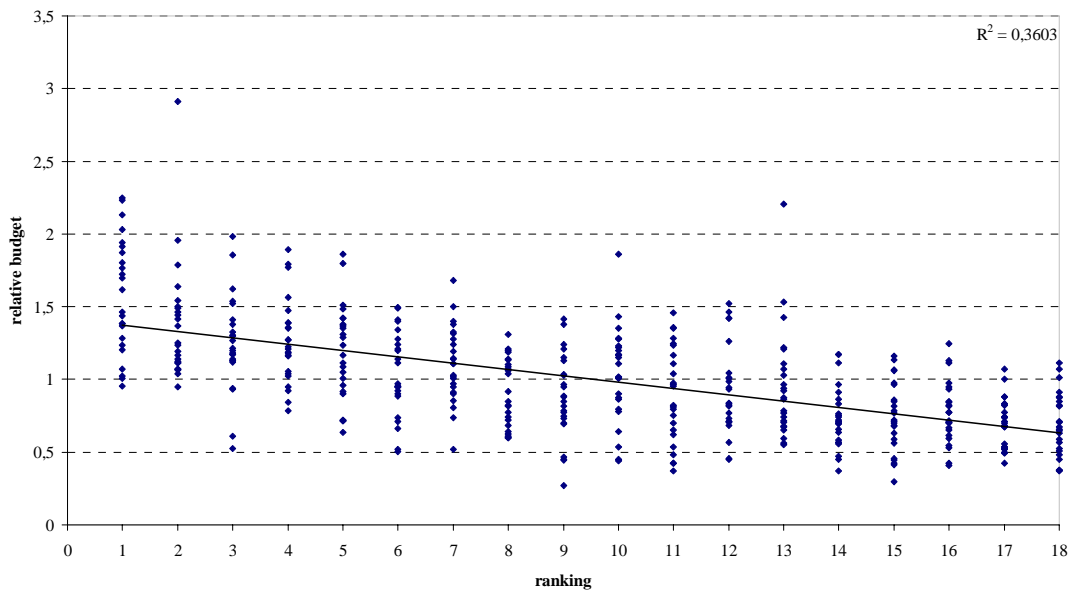
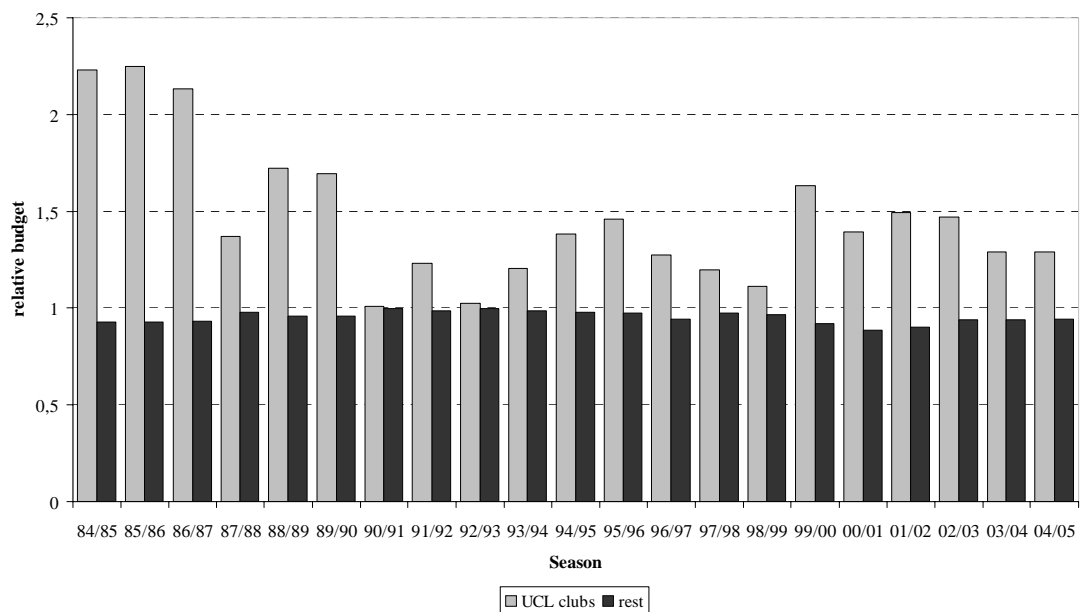


Fig. 11 The Development of the Relative Budget of Teams Qualifying for UCL and the Other Teams



2.1.3 Test of Relationship between Qualification for UCL and Transfers

Figure 11 provides a scatter plot of the relationship between qualification for UCL and the transfer expenditure. On the y-axis of this diagram the relative transfer expenditure is shown, while the ranking is displayed again on the x-axis. This relationship does not appear to be very strong. Indeed the slope of the linear trend line is negative, as one would expect. However, the corresponding R^2 is very small (0.23). In particular, the range of the transfer expenditure for the top clubs is very wide. For the first placed team it can vary from nearly zero to nearly six with one representing the average transfer expenditure. It is also remarkable that none of the teams later relegated have had a relative transfer expenditure of above one, i.e. their transfer activity was always below the average. However, this of course does not mean that a team with substandard transfer expenditure will be relegated with certainty.

A glance at the trends in relative transfer expenditure of teams qualified for the UCL and the other teams (see Figure 12) also contradict the thesis of an growing imbalance. The difference between UCL clubs and the other clubs was much larger at the beginning of the period in question. After 1995/96 the gap between these two categories declined almost continuously, with a little counter movement at the end. Thus there no evidence for growing imbalance in transfer expenditure can be found.

Fig. 12 Annual Relative Transfer Expenditure and Ranking, 1981/82 - 2004/05

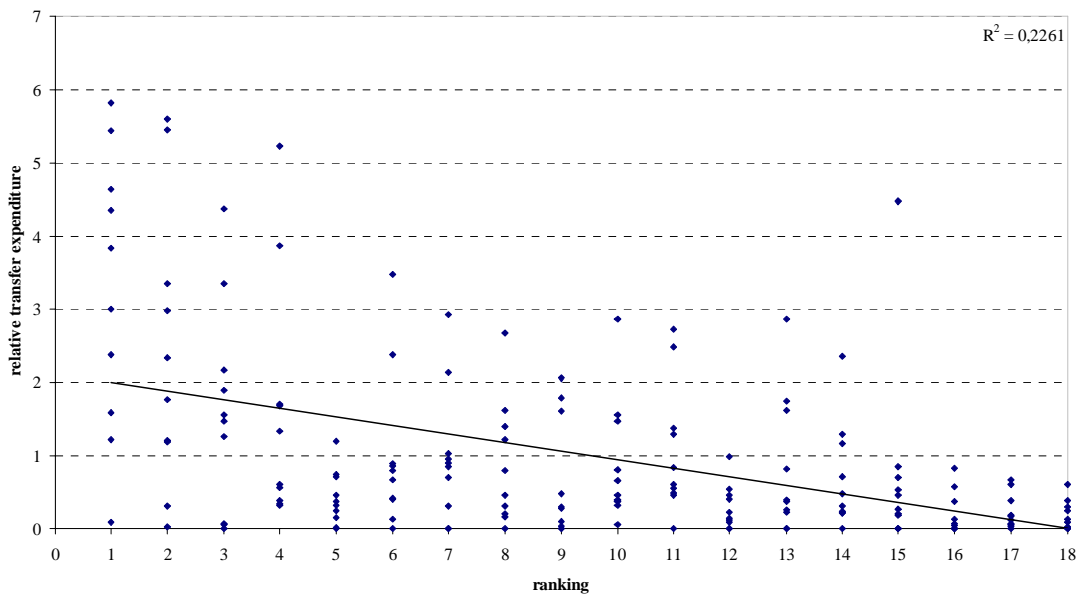
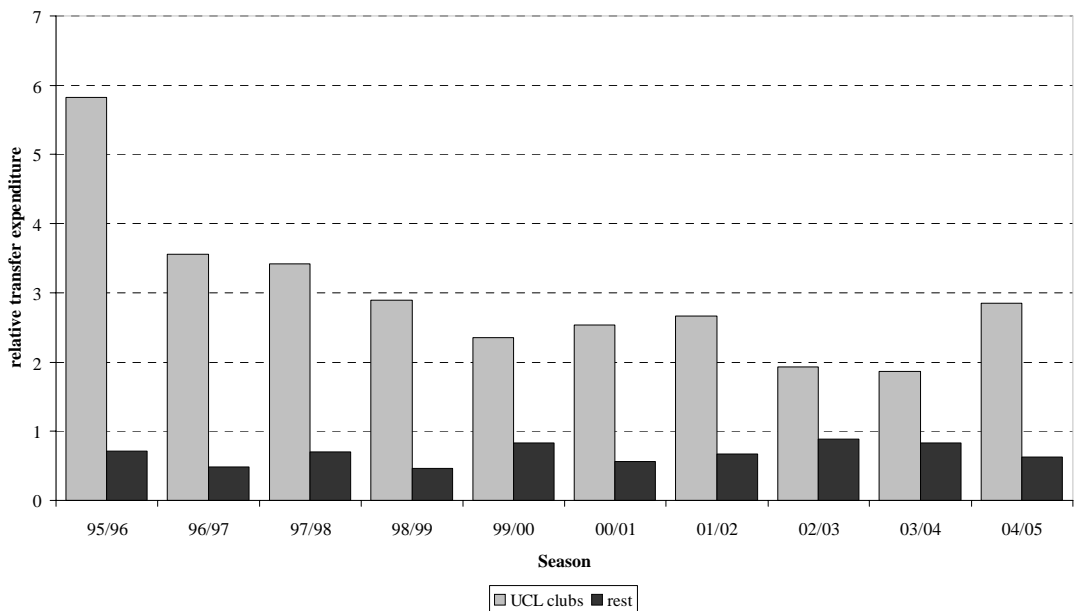


Fig. 13 The Development of the Relative Transfer Expenditure of Teams Qualified for UCL and the Other Teams



Finally, it can be concluded that no trends in competitive balance can be observed. Likewise no evidence for growing imbalance in budgets or transfer expen-

diture can be found. Furthermore no substantially higher TV revenues result from finishing a season in a top position, as opposed to those finishing in the remaining UCL qualification places. As intermediate result it can be seen that no evidence exists of a noticeable effect of the UCL on the analysed areas.

3 Regulatory mechanisms

3.1 Presentation of National Mechanisms

3.1.1 Solidarity (Sharing of Revenue)

The most important revenue sharing agreement is the central marketing of the TV rights. The TV rights for the Bundesliga are sold collective by the German Football Association (DFB) and since independence by the DFL. Up to the end of the 1990's the revenue from TV rights were shared between Bundesliga (first division) and Bundesliga 2 (second division), with Bundesliga receiving 66.6 % and Bundesliga 2 receiving 33.3 %. The allocation between the clubs in each division was then conducted equally. Since 2000 the TV revenues are shared 77.5 % (first division) to 22.5 % (second division). 50 % of the contingent of the Bundesliga is shared equally among the clubs, while a further 37.5 % are distributed according to the sporting success over the past three years. The remaining 12.5 % is allocated considering the actual league table position as of each match day (HOLZHÄUSER, 2004, p. 19). In the Bundesliga there are no noteworthy revenues generated by finishing a season in a top position additional to those revenues achieved by the UCL participation. For this reason the proportion of the TV revenues sold by the DFB/DFL of the clubs qualified for the UCL is not important in assessing the impact of the UCL for the Bundesliga. Other kinds of revenue sharing are more or less meaningless. No gate sharing is practiced in the Bundesliga.¹¹ From mid to the end of the 1990's a solidarity fund existed. Clubs participating in the UCL shared 20 % of their UCL revenue. Clubs participating in the UEFA cup paid €0.5 million per game but maximum €2 million per season. This solidarity fund was

¹¹ For matches of the DFB cup the gate revenue will be shared between the two opponents and the DFB.

cancelled after the readjustment of the national TV revenue in 2000 (HOLZ-HÄUSER, 2004, p. 19).

3.1.2 Training (Training Centers/Academies)

All clubs of the Bundesliga and Bundesliga 2 are obliged to keep a youth training centre. The aim of these centres is to ensure a high quality training of talented players of the different age groups.¹² The clubs have to manage at minimum seven teams and at maximum nine teams in the youth and amateur area. Some structural conditions have to be fulfilled by the 18 clubs of the Bundesliga.¹³ The conditions can be structured as follows (syllabus):

- Training compound: 3 pitches, 2 of them with floodlight, the possibility to use an indoor pitch.
- Sporting care: 3 full-time coaches (one of them has to be the director of the centre), 1 goalkeeper coach.
- Medical care: 1 medical doctor, 1 physical therapist, 1 diploma trainer or physical therapist as coach for condition and rehabilitation.
- Non-sporting care: A pedagogical expedient care has to be ensured (e.g. residential school, host parents).
- Educational care: Cooperation between a school and the club has to be arranged. There should be additional training sessions offered by this school. Also the sporting demands should be coordinated with the academic requirements.

These training centres will be inspected by a commission of the league association ever year. A memorandum will be provided to the DFL for the purpose of the licensing procedure.

¹² This is fixed in the licensing principle (§3 II Lizenzordnung).

¹³ The conditions for the clubs of Bundesliga 2 are less strict and won't be presented in detail.

3.1.3 Financial Control (Institutions and Procedures)

The following details base upon the German paper “cost control and competition protection by a licensing procedure” from MÜLLER (2003).¹⁴

There are three institutions involved in the licensing procedure. Prior to the end of the 1990’s the DFB was responsible institution. Since independence of the league two institutions process the licensing procedure: The so called “league association” (Ligaverband e.V.) and the DFL GmbH.¹⁵ The license will be granted by the board of directors of the league association but the licensing procedure will be undertaken by the DFL.

This licensing procedure isn’t only based on economic criteria but it is the most important. Additionally the clubs have to fulfil sporting, technical, organizational, and infrastructural conditions. Since the clubs normally fulfil these additional criteria and the critical hurdle often exists in the economic conditions, only these conditions shall be considered in the next remarks. The aim of the DFL licensing procedure is, first of all, to guarantee that a started season will be finished regularly. Non club shall be gone bankrupt during a season. Thereby stability, integrity, and continuity will be ensured.

The following documents have to be added by the individual clubs:

- An audited balance sheet (dated: 31.12.t-1)
- A profit and loss statement for the last season (01.07.t-2 to 30.06.t-1) and for the first half of the actual season (01.07.t-1 to 31.12.t-1)
- A review of the economic situation by the board of directors

¹⁴ The author is executive director for finance, administration and accounting at the DFL and his department is responsible for the financial aspects of the licensing procedure.

¹⁵ The league association is a self-contained member of the DFB. All 36 clubs of the Bundesliga and Bundesliga 2 are members of it. The DFL GmbH conducts the operative business of the league association. The league association is the only shareholder of the DFL GmbH.

- A planned profit and loss statement for the second half of the actual season (01.01.t to 30.06.t) and for the next season (01.07.t to 30.06.t+1)

These documents have to be declared plausible by a certified accountant. Beyond this the applicant has to present a set of legally binding declarations. The club have to:

- commit themselves to provide important contracts in the field of marketing and sports.
- assure that at 31.12.t-1 all accrued liabilities to the employee and all taxes on wages will be paid.
- assure that at 31.12.t-1 all accrued transfer fees will be paid.
- absolve its credit institutions from banker's secrecy to the league association.
- allow the DFL to request the responsible tax office for information.
- disclose all investments in other companies.
- commit themselves to keep the (possible) licensing conditions.

Based on these documents the DFL is checking the economic ability of the clubs. The priority goal for this evaluation is the liquidity of the club applying for a license. Starting from the audited liquid assets at 31.12.t-1 all transactions affecting payment will be considered and a balance of liquidity will be calculated. If the economic ability is inexistent the license won't be granted or will be granted with conditions. Furthermore the function of the equity capital as a risk buffer and liability bulk will be regarded. A breach of the extended conditions results in sanctions like a formal reprimand, a monetary penalty or even deduction of points and, in the worst case, the withdrawal of the license.

In addition to the licensing procedure a system of security deposit exists in German professional football since the 1980's. The clubs are obliged to keep a cash bond on a DFL trust account. The amount of this cash bond has to be as high as the labour expenditure of one month.

3.2 Impact of UEFA Licence

In Germany there will be no additional licensing procedure implemented. The clubs will be controlled by the national licensing procedure which is corresponding to the requirements of the UEFA. A granted national license simultaneous will be a granted licence for an European cup competition. Since the licensing procedure in Germany is running for a long time there are no expected and observed impacts of the UEFA license on the Bundesliga. But for the international comparison some sports functionaries and fans have the hope that the international competitiveness of the German clubs will be improved. This hope is accorded to the fear that foreign clubs operating at deficit won't be controlled effectively and thus received a competitive advantage over the mentioned German clubs. But there isn't still enough time gone to examine these expected effects.

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