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The Challenge of Attracting Football Fans to Stadia?

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Abstract

This article, which is based on an empirical survey of Norwegian football fans, illustrates that frequent viewership of football on TV can make it difficult to maintain attendance levels at the stadium. Fans of clubs that were featured the most often on free-to-air TV channels attended fewer matches than others. Hence, regulations on televised football might be necessary to maintain attendance levels. Fans that had strong preferences for foreign football attended less frequently. This represents a challenge for football clubs in smaller nations, such as Norway, for example, since they are unable to regulate televised matches featuring foreign leagues. Identification with the club was demonstrated to be the most effective instrument in maintaining attendance levels. As a result, a strategy aimed at strengthening the bonds between fans and clubs may be beneficial in the long run. No difference was measured between those who attended matches often and those who attended less frequently regarding the emphasis they placed on the uncertainty of outcome.

Keywords: attendance, TV matches, substitution

Introduction

In recent years, technological innovations have given football fans new opportunities to watch their sport without having to attend matches in a stadium. The number of live televised matches has grown significantly. In contrast to a few years ago, it is now possible to watch matches on laptops, Touchpads/Ipads, and mobile telephones, in addition to traditional TV. Additionally, technological improvements have enhanced the quality of sports programs.

The increase in the number of televised matches also has increased the revenue of the clubs. For many of them, the sale of media-rights has become the single most important source of revenue. In the big five European leagues (England, Spain, Italy, Germany and France), it accounts for more than 50% of the total revenue of many clubs (Deloitte, 2013).

This development, however, can make it difficult to maintain attendance at the stadium. The quality of a televised match is best when there is a lively audience at a sold-

out stadium. This makes it important to maintain attendance. As a result, information about the factors that influence whether fans prefer to attend matches at the stadium or watch matches on TV is important.

The fear that fans not will attend matches in the stadium is the reason underlying the regulation of football on TV. The English Premier League, for example, only allowed 138 of 360 matches (38%) to be screened live on TV for several years, a limit which will be increased to 154 (43%) for the 2013-2014 season¹. It also limits how often each club can be shown on TV during the season. Furthermore, matches during the most common match time, 3:00 PM on Saturdays, are not permitted to be shown live (Gratton & Solberg, 2007). Although other European leagues have allowed entire matches to be shown live on TV, the majority have been available only on pay TV stations with limited viewership.

Similar regulations are found in North American professional team sports. Since 1973, the National Football League maintained a blackout rule, which prevented matches from being televised locally unless they were sold out 72 hours prior to their start time. In this context, *locally* is defined as any area within a 75-mile radius of the stadium. In 2012, the regulation was moderated and the sold out requirement was replaced by an 85% attendance rate to avoid a blackout².

The bodies governing Norwegian football have been liberal regarding this matter and have allowed more football to be shown on free-to-air TV channels than many other European nations. For several years, this did not have any negative effect on attendance figures. From 1997 to 2007, the average fan attendance of matches played in the Norwegian elite league increased from 4,242 to an all-time high of 10,521 per match. Since then, however, the situation has reversed, with attendance decreasing six years in a row. From 2007 to 2012, the reduction in attendance was 68%. Some football officials have blamed the increase in TV viewership of football for this reduction.³

Table 1 compares attendance figures for the Norwegian elite league and the major European football leagues during the first years of this century. The last two rows show the average attendance since the start of this century, while the rows above show the development over the entire period. To enhance the ease of the comparison, the average attendance for each nation is indexed at 100.

The table clearly illustrates how the pattern in Norway differs from the major European football leagues. While Norwegian clubs experienced significantly stronger growth than any other league during the first seven years of this century, since then, the pattern has been completely reversed. None of the major European nations have had a reduction comparable to that in Norway in recent years. However, the bottom row of Table 1 illustrates that the average attendance per capita in Norway is significantly higher than in any of the other nations.

The decrease in attendance in Norway indicates that some spectators have stopped attending football matches and others attend less frequently than before. This research will concentrate on the latter group and analyze the factors that influence how often they attend. Hopefully, this research will contribute to explaining the decrease in attendance in recent years.

A central issue in this research is the degree to which—and for whom—football on TV represents a substitute for attendance at the stadium. In this case, the substitution at issue includes televised matches from both the domestic league and foreign leagues.

Table 1: Attendances at Elite League Games (21st Century): Index/Average

	Norway*	England	France	Germany	Italy	Netherlands	Spain
2000-01	71	95	110	79	119	n.a.	n.a.
2001-02	70	99	105	84	108	87	95
2002-03	78	102	95	87	104	92	100
2003-04	82	101	97	96	105	91	103
2004-05	101	98	103	97	105	90	101
2005-06	120	98	104	104	89	93	103
2006-07	116	99	105	102	74**	100	101
2007-08	133	104	105	101	105	104	102
2008-09	124	102	101	109	103	110	99
2009-10	112	98	97	109	103	109	99
2010-11	103	102	95	109	98	107	98
2011-12	101	100	91	115	92	108	99
2012-13	88	103	93	109	95	109	98
Average	7912	34736	20754	39147	24570	18015	28692
Average per cap	1,55	0,61	0,31	0,48	0,40	1,07	0,61

Retrieved on June 24, 2013 from <http://www.worldfootball.net/> and <http://footballnet.espn.go.com/stats/attendance/>; and <http://www.ligue1.com/ligue1/affluences/club>; and <https://www.cia.gov/library/publications/the-world-factbook/rankorder/2119rank.html>; and <http://worldpopulationreview.com/population-of-england/>

*The Norwegian season takes place during the same calendar year, and the figures in the table refer to the first year.

**This season, Juventus, one of the most popular clubs, was forced to play in the second division due to irregularities.

In addition, we include variables known from the literature addressing the demand for sports, including both psychological and sociological dimensions. Since our research was of an explorative nature, we also investigated issues that were brought to light by general discussion about the reasons underlying the decrease in attendance since 2007.

The next section provides a discussion of the supply in Norway during the first years of this decade of football matches on TV stations accessible to Norwegian viewers. This is followed by a literature review, combined with reflections on the theoretical perspectives underlying this topic. Next, we include comments about the empirical survey and methods. This is followed by a presentation of the results. The final section discusses these findings and makes conclusions.

The Availability of Football on TV

The commercialization of the European TV markets over the last two decades, combined with technological innovations, has significantly increased the supply of football on TV, in Norway and the rest of Europe. The first two seasons of this century, one match in Norway's domestic elite league was broadcast per week. In 2002, the number increased to four, and since 2006, all matches have been broadcast live. In 2009, the

league was expanded from 14 to 16 teams, and as a result, the number of weekly matches increased from seven to eight. Norway has allowed two to three matches per week to be shown on free-to-air TV channels. This is different from elsewhere in Europe, where live matches primarily have been on pay TV channels. Media companies have kept information about the market penetration of pay TV channels secret. However, according to Knut-Kristian Hauger⁴, about 9-10% of TV-viewing households subscribed to channels broadcasting the English Premier League in 2013, while 4-5% subscribed to channels broadcasting the Norwegian elite league (currently named The Tippeliga after its main sponsor)⁵. In comparison, the free-to-air channels broadcasting matches had a potential viewership that exceeded 95% of the TV-viewing households.

Norwegian football fans have traditionally been very interested in football available on TV featuring other European leagues. In particular, the English Premier League has been very popular (Hognestad, 2003). In 2005, 201 (58%) of the English Premier League matches were shown on TV channels in Norway. In 2011, the number was 281 (78%). The latter figure was more than twice the number of matches available to English fans. In recent years, there also has been strong growth in televised matches from the other big-five European nations (Italy, Spain, Germany, and France), as seen in Table 2. In addition, there are televised matches from international tournaments (UEFA's Champions League and Euro League), which are not included in the table. Hence, Norwegian football fans are given plenty of opportunities to watch football, without having to attend matches at the stadium.

Theoretical Context: Literature Review

Borland and McDonald (2003) present an overview of demand analyses for sports, distinguishing between *direct demand* and *derived demand*. The types of *direct demand*, upon which this paper will concentrate, are demand for live attendance at sporting contests or demand for sporting contests on TV, Internet, or similar modes. *Derived demand* can arise, for example, from media companies seeking production inputs of programming content and organizations seeking marketing-campaign inputs to establish or enhance the brand name and reputation of their products through advertising and/or sponsorship.

Table 2: Number of TV Matches from Elite Leagues Shown on Norwegian TV Channels

	English Premier League	France, Germany, Italy, Spain	Total
2005	207	94	301
2006	253	87	340
2007	245	132	377
2008	260	144	404
2009	274	222	496
2010	287	473	760
2011	281	673	954

Accessed on June 24, 2013, from <http://www.fotballen.eu/TV.html>.

Televised football as a substitute to attending matches in the stadium

Watching televised matches is free of charge from a short-term perspective, once fixed fees such as subscription fees, license fees, and fees due to cable and satellite operators are paid. The exception is pay-per-view fees. The majority of pay TV channels sell subscription packages that include a number of matches. In such cases, the variable cost of watching a specific match is zero. The same principle applies to season ticket holders whose variable costs of attending matches at the stadium will only include travel costs. There also will be time costs, which are lower for watching TV than for attending matches at the stadium. The value of time costs will be affected by the individuals' income and by their evaluation of spare time. Watching televised matches is the least time-consuming alternative and therefore, the most favorable option for people whose time costs are high, other things being equal.

Several studies have investigated the degree to which televised matches reduce attendance at the stadium. Allan and Roy (2008) concluded that live televised matches reduced the number of pay-at-the-gate home club supporters by 30% in the Scottish Premier League during the 2002-03 season. Baimbridge, Cameron, and Dawson (1996) found that televised matches significantly reduced in-person attendance of English Premier League matches on weeknights by an average of 15%, although they did not have that effect on weekends. Garcia and Rodriquez (2002) documented a significant reduction in spectator attendance for televised matches in Spain, with a more pronounced effect for matches shown on free-to-air TV.

Substitution also may involve televised matches from other leagues. Forrest and Simmons (2006) documented evidence that televised matches from UEFA's Champions League had a negative effect on concurrent matches in the English Premier League. In 2012, the most popular European leagues, including UEFA's Champions League, were broadcast worldwide. In particular, football fans in small nations may consider those televised matches as an alternative to in-person attendance of matches played by their domestic league. Multinational squads, which have become very common in recent years, are effective in promoting leagues and clubs in overseas markets (Solberg & Turner, 2010).

The Norwegian league's season starts in March and finishes in November. As a result, it has an overlap of four to five months with the major European leagues. Surveys have shown that attendance at Norwegian matches tends to be lower in the months during which their matches have overlapped with those of the five major leagues in Europe (Kringstad & Solberg, 2012). Additionally, the general growth of televised football may have caused saturation among football fans.

Other motives

The attendance demand for football is also influenced by factors other than the availability of substitutes. Sports economists particularly have paid attention to the *uncertainty of outcome*, which is one of the key factors of sports competitions as a commodity (Gratton & Taylor, 2000). Other things being equal, the more uncertainty there is regarding the result, the higher the public demand for the sport (Noll, 1974). Kringstad and Gerrard (2007) focused on *competitive intensity*, which refers to matches that are of special importance, for example, involving clubs trying to qualify for international tournaments or to avoid relegation. Another, and similar, factor is the so-

called *star effect*. A longitudinal study of the German football league documented that the presence of superstars enhanced attendance both at home matches and those on the road (Brandes, Franck, & Nüesch, 2008).

Researchers from disciplines such as sociology and psychology have emphasized other motives. One example is *identification* with a club or an athlete; that is, sport spectators who feel psychologically connected to a club or a specific player or athlete (Guttmann, 1986; Wann, 1997). For fans with a high level of club identification, the role of club follower is a central component of their identity. The club's success becomes the fan's success, and the club's failure becomes the fan's failure. Several studies have measured club identification by means of the *Sport Spectator Identification Scale* (SSIS) (Gayton, Coffin, & Hearn, 1998; Straub, 1995; Uemukai, Takenouchi, Okuda, Masumoto, & Yamanaka, 1995), an instrument developed by Wann and Branscombe (1993). Studies on the outcome of club identification show that spectators with high club identification are more likely to have high direct and indirect sports consumption, pay more for tickets, spend more money on merchandise, and stay loyal to the club in periods of poor performance (Melnick & Wann, 2004; Wann, Melnick, Russel, & Pease, 2001). A recent study by Mehus and Osborn (2010) of football spectators in Norway showed that male spectators identify more strongly with their favorite club than do female spectators, and that highly educated spectators identify less strongly than spectators with a lower level of education. The study also investigated the impact of motives and club identification on direct demand (direct and indirect consumption), and showed that club identification functions as a mediator between excitement motives and consumption.

In recent years, there have been several attempts to develop a scale to measure the various motives of sport spectators. The *Sport Fan Motivation Scale*, developed by Wann (1995), includes eight factors. The *Motivation Scale for Sport Consumption*, developed by Trail and James (2001), includes nine factors. The *Scale of Attendance Motivation*, developed by Zhang, Pease, Lam, Bellerieve, Pham, Williamson, Lee, and Wall (2001), includes five factors. The *Entertainment Sport Motivation Scale*, developed by Mehus (2005), includes two factors. Reviewing the literature on sport consumption motivation, Smith and Stewart (2007) argue that there are three dimensions: *psychological*, *sociocultural*, and *social belonging*. Another review by James and Ross (2002) concludes that there are primarily four types of motives: *attributes of spectator sports*, *sociability*, *entertainment*, and *self-definition*. Clearly, the many scales and inconsistent labeling of motives indicate important challenges when comparing studies across different sports and levels of sport.

Motives of sociability appear in all the aforementioned scales, and are based on the fact that humans are social beings, a reality reflected in a number of classical theories of human motivation (Alderfer, 1972; Maslow, 1970). Sport spectating is, in most instances, a social activity, providing an opportunity to spend time with others. Indeed, the social nature of sport spectating is for many what attracts them to sport viewing. This is known as the *group affiliation motive*, i.e., a desire to spend time with others. The *family motive* is similar to the group affiliation motive. It involves a desire to be a fan because it provides an opportunity to spend time with family members (Danielson, 1997).

Another consistent motive is related to the search for *excitement*. The *eustress motive* involves individuals who do not receive a sufficient amount of stimulation in their

everyday lives. Some people participate in sport fandom to gain excitement and stimulation and thus, are motivated by eustress. Fans with high levels of eustress motivation become involved because of the excitement and arousal they can experience by watching sports. Similar aspects characterize the *entertainment motive*. In this respect, sport spectating is viewed as similar to other recreational pursuits, such as going to the theater, watching television, listening to music or reading. Additionally, some fans will emphasize the *quality* dimension (Wann et al., 2001).

The regression analyses in the empirical section will investigate the degree to which the motives discussed in this section affect how often the respondents attended. Additionally, they will investigate the effects of other variables known from the current debates on this issue.

Methods

The empirical data are from a survey of spectators of the Norwegian elite league in 2010 who bought tickets online. The surveys were conducted over a period of two weeks, shortly after the completion of the 2010 season, and the respondents received one reminder. Eleven clubs allowed us to send the questionnaire directly. For these clubs, the average response rate was 22.4% (9074 replies on 40521 requests). The response rate varied between the clubs, from a minimum of 18% to a maximum of 34%. Three clubs sent out the questionnaires themselves, and for these, we do not know the response rate. However, information about their fan base combined with the size of the sample indicates a response rate similar to the other clubs, after i.e., between 18 and 34%. Eighty-two per cent of the respondents were men, while 18% were women. All clubs were involved, except for Rosenborg (the champions) and Strømsgodset (seventh place in the league and winners of the National Cup), both of which were unwilling to participate in the survey.

Some clubs have limited experience selling tickets on the Internet and, therefore, possess a small database. These clubs were underrepresented in the original sample. Therefore, the sample was adjusted by a vector to reflect the correct distribution of attendance among the clubs this season.

The attitude variables were measured by a Likert scale from one to seven, with one indicating total disagreement and seven indicating total agreement. For variables that were measured by grade of importance, seven indicated extremely important, while one indicated not at all important.

Regression models

Descriptive statistics showed significant differences between season ticket holders and spectators who bought single tickets, and we therefore present separate regression analyses for the two segments. The aim of the regression analyses was to identify the factors that influenced how often the respondents attended. The dependent variable was the number of home matches fans attended during the 2010 season. This was a count variable, ranging from one to fifteen, and therefore we applied Poisson regression. Using attendance frequency as the dependent variable enabled us to analyze the factors that influenced how often specific categories of fans attended in a way that not would have been possible if we had used aggregate attendance figures, which has been common in traditional demand analyses.

As for the independent variables, the substitution dimension involved several variables. Firstly, we focused on televised football in general as an alternative to attending matches at the stadium. Secondly, the number of home matches of the specific clubs shown on free-to-air TV channels also was included among the independent variables. Thirdly, the respondents graded their preferences for foreign football compared to Norwegian football. Finally, they also were asked if they had a favorite foreign club.

As for the other variables, the number of items connected to them varied. The variable called *entertaining*, *eustress*, and *excitement* loaded on the same component in the exploratory factor analyses. Therefore, they were combined as one single variable in the regression analysis. The survey included several questions covering the *uncertainty of outcome* dimension. However, because of low Chronbach's alpha values when combining them, we only used one in the regression. Note that our approach here is different from other analyses, in which the correlation between competitive balance and attendance has been calculated by various formulas. See Humphreys and Watanabe (2011) for an overview.

The variable called *quality Norwegian league* measures how the respondents themselves considered the quality, and not for example, FIFA's or UEFA's ranking of Norwegian football. Those who considered the quality to be very good gave a score of seven, while those who viewed it to be very poor scored it one.

The variable called *match attractiveness* consists of three variables. One measures the importance of *competitive intensity*, while the other two refer to *star players* and *the quality of the visiting club*.

As mentioned above, the survey also focused on issues of current interest that have been suggested as potential reasons for the reduction in attendance. One such example was the degree to which the reduction of local players had been excessive. This reduction is a result of the import of foreign players, a well-known phenomenon not only in Norway, but across nearly all of European football.

In recent years, several clubs have upgraded stadia and facilities in an effort to make their spectators more comfortable. Therefore, the respondents were asked to grade the importance of services and facilities that were not directly related to football dimensions. Furthermore, due to the expansion of the elite league from 14 to 16 clubs in 2009, the football season has been starting earlier than in prior years, in mid-March. This change was controversial as many matches will be played in winter conditions, including snow and cold temperatures during this period. Therefore, the respondents were asked whether the season started too early.

Despite some degree of similarities between some of the exploratory variables, correlation analysis did not indicate any signs of multicollinearity.

Results

Tables 3 and 4 show the average number of home matches the respondents attended during the 2010 season. Fans of clubs with the lowest supporter bases attended more frequently than fans of other clubs. The former group included the newly promoted clubs, which were 11, 13, and 14 on the overall ranking list in this sample. Season ticket holders in Haugesund, the only promoted club that survived in the elite league, had the highest average attendance. However, due to the very low sample for the relegated clubs, it is important to be careful when drawing conclusions.

Table 3: Average Number of Home Matches of Favorite Club Attended: Season Ticket Holders

Favorite club (ranking)	Average	N	S.D.	Average attendance club	Capacity utilization	Attendance ranking
Haugesund (6)	12.92	167	2.452	4660	90%	11
Start (8)	12.20	393	2.568	8388	59%	6
Hønefoss (14)	12.17	81	3.114	3313	66%	13
Kongsvinger (15)	12.10	10	1.663	2776	56%	14
Odd (5)	11.96	294	2.842	6585	51%	9
Lillestrøm (10)	11.92	365	2.769	6611	53%	8
Aalesund (4)	11.91	431	2.873	10146	94%	4
Tromsø (3)	11.84	234	2.977	4696	63%	10
Vålerenga (2)	11.74	368	2.811	13650	53%	2
Stabæk (12)	11.71	153	2.600	8147	54%	7
Molde (11)	11.47	456	3.061	8412	75%	5
Brann (13)	11.44	1425	3.138	13744	79%	1
Viking (9)	11.23	811	3.059	11530	71%	3
Sandefjord (16)	10.87	103	3.086	4566	49%	12
All clubs (weighted)	11.75	5251	2.915		65% ⁶	

Table 4: Average Number of Home Matches of Favorite Club Attended: Single Ticket Holders

Favorite club (ranking)	Average	N	S.D.	Average attendance club	Capacity utilization	Attendance ranking
Sandefjord (16)	9.05	22	4.520	4566	49%	12
Hønefoss (14)	6.06	17	4.562	3313	66%	13
Kongsvinger (15)	6.10	67	3.885	2776	56%	14
Odd (5)	5.80	547	3.812	6585	51%	9
Lillestrøm (10)	5.54	353	3.909	6611	53%	8
Stabæk (12)	5.09	98	3.449	8147	54%	7
Haugesund (6)	4.96	50	4.184	4660	90%	11
Tromsø (3)	4.90	245	3.530	4696	63%	10
Start (8)	4.77	348	3.345	8388	59%	6
Vålerenga (2)	4.67	664	3.281	13650	53%	2
Molde (11)	4.50	426	3.158	8412	75%	5
Aalesund (4)	4.43	291	3.310	10146	94%	4
Brann (13)	4.00	657	2.925	13744	79%	1
Viking (9)	3.64	631	2.771	11530	71%	3
All clubs (weighted)	4.74	4440	3.435		65% ⁷	

The figures do not indicate any correlation between sporting performance and attendance frequency, neither among season ticket holders nor spectators with single tickets. Fans of Vålerenga, which was the most successful club in our sample this season (finishing second) was number nine among season ticket holders and number 10 among spectators with single tickets, according to the frequency rating. Fans of Tromsø, which finished third, were number eight in both segments.

Table 5: Variable Information

Dependent Variable	Whole sample		Season tickets (N = 4103)		Single tickets (N = 2853)	
	Number of items	Chronbach Alfa	Mean	Std. Dev.	Mean	Std. Dev.
Matches attended			11,79	2,813	5,08	3,529
Covariate						
Club identification	6	0.912	6,26	,886	5,57	1,376
Social dimension	2	0.683	4,85	1,367	4,43	1,428
Too early start of season	1		4,85	2,030	4,49	1,993
Entertainment/ eustress/exciting	3	0.773	5,59	1,046	5,38	1,146
Importance other facilities/services	5	0.661	4,74	1,034	4,65	1,032
Too few local players	1	-	4,05	1,753	3,92	1,732
TV matches better than being at stadium	1	-	1,66	1,140	2,18	1,407
Prefer foreign football	3	0.797	2,59	1,482	2,96	1,803
Match attractiveness	3	0.696	3,98	1,328	4,14	1,238
Uncertainty of outcome	1	-	4,29	1,457	4,45	1,431
Quality Norwegian elite league	1	-	3,55	1,318	3,61	1,334
Income (Ln)			6,17	,7158	6,06	,761
Age			42,42	12,01	40,1	11,8
Travelling time			24,18	18,34	35,78	29,15
Foreign favorite club (dummy, yes = 1)						
Gender (dummy, men = 1)						

Table 5 provides an overview of the dependent and independent variables in the regression analyses. Season ticket holders attended more than twice as many matches as single ticket holders. Variables one to six were emphasized significantly more by holders of season tickets, while variables seven to eleven were emphasized more by spectators with single tickets.

As expected, season ticket holders identified more strongly with their clubs than holders of single tickets. The social dimension related to sport watching was more important to season ticket holders. The same applied to the entertainment/eustress/exciting dimension. Furthermore, season ticket holders also considered the season to start too early and were disappointed by the low number of local players. However, regarding these two variables, the reason why the moderate gap in mean values was significant also is related to the large sample.

Table 6: Poisson Regression Analyses. Dependent Variable: Number of Home Matches Attended to Watch Favorite Club. Season Ticket Holders

Parameter	B	Std. Er.	Hypothesis Test Wald Chi-Square	Sig.	Exp(B)
(Intercept)	2,316	,0637	1320,137	,000	10,132
Substitution					
TV better than being stadium	-,028	,0043	41,217	,000	,973
Home matches favorite club on free-to-air TV	-,006	,0017	11,598	,001	,994
Prefer foreign football	-,015	,0037	16,364	,000	,985
Foreign favorite club (dummy, yes =1)	,007	,0109	,444	,505	1,007
Dimensions literature					
Club identification	,061	,0063	93,955	,000	1,062
Match attractiveness	-,015	,0039	14,331	,000	,985
Entertain/Eustress/Exciting	,014	,0050	8,028	,005	1,014
Higher education (dummy, yes = 1)	-,021	,0099	4,716	,030	,979
Quality Norwegian elite league	,006	,0038	2,704	,100	1,006
Social dimension	,006	,0037	2,564	,109	1,006
Uncertainty of outcome	-,002	,0033	,270	,604	,998
Other dimensions (current debate)					
Too few local players	-,009	,0027	10,189	,001	,991
Too early start of season	,004	,0023	3,289	,070	1,004
Attending with family (dummy, yes = 1)	-,006	,0094	,379	,538	,994
Other services/facilities	-,001	,0049	,077	,781	,999
Other control variables					
Travelling time	-,002	,0003	33,444	,000	,998
Income (Ln)	-,024	,0068	12,679	,000	,976
Gender (men = 1)	,023	,0135	2,852	,091	1,023
Age	,001	,0004	1,568	,210	1,001

The figures clearly documented that single ticket holders were more likely to watch football on TV rather than attend matches at the stadium. The same result applied to foreign football as to Norwegian football. Single ticket holders also emphasized match attractiveness and uncertainty of outcome more strongly than season ticket holders. For all the variables mentioned above, the differences were significant at a 0.01% level. The only variable in which the difference between the two segments was insignificant was their views on the quality of the Norwegian league.

Table 7: Poisson Regression Analysis. Dependent Variable = Number of Home Matches Attended to Watch Favorite Club. Single Tickets

Parameter	B	Std. Er.	Hypothesis Test Wald Chi-Square	Test Sig.	Exp(B)
Substitution					
TV better than being stadium	-,028	,0043	41,217	,000	,973
TV better than stadium	-,087	,0067	169,624	,000	,917
Home matches favorite club on free-to-air TV	-,033	,0026	160,222	,000	,967
Prefer foreign football	-,042	,0059	49,380	,000	,959
Foreign favorite club (dummy, yes = 1)	,005	,0205	,059	,809	1,005
Dimensions literature					
Club identification	,198	,0087	521,162	,000	1,219
Match attractiveness	-,027	,0074	12,964	,000	,974
Higher education	-,061	,0177	11,725	,001	,941
Entertain/Eustress/Exciting	,028	,0093	8,871	,003	1,028
Quality Norwegian elite league	,016	,0068	5,561	,018	1,016
Social dimension	,010	,0069	2,321	,128	1,011
Uncertainty of outcome	-,002	,0060	,076	,783	,998
Other dimensions (current debate)					
Too early start of season	,020	,0042	22,479	,000	1,020
Too few local players	-,023	,0051	20,346	,000	,977
Attending with family (dummy, yes = 1)	-,069	,0176	15,250	,000	,934
Other services/facilities	-,009	,0094	,830	,362	,992
Other control variables					
Travelling time	-,006	,0003	305,070	,000	,994
Gender (men = 1)	,099	,0233	18,029	,000	1,104
Age	,002	,0008	7,936	,005	1,002
Income (Ln)	,000	,0116	,001	,979	1,000
(Intercept)	,992	,0989	100,537	,000	2,696

Tables 6 and 7 present the findings from the Poisson regression analyses. As for the *substitution dimension*, respondents who enjoyed televised football attended fewer matches than others. The same applied to the other TV-variable. The more often the home matches of their favorite club were shown on free-to-air TV channels, the more seldom fans attended. The regression analyses also confirmed that fans having a strong preference for foreign football attended less frequently. For each of these three variables, the effects were strongest among those who bought single tickets. On the other

hand, being fans of a foreign club did not in itself affect how often they attended the home matches of their favorite Norwegian club.

As for other variables known from the literature, *club identification* had the strongest effect among the attitude variables, a pattern that particularly applied to spectators with single tickets. Respondents for whom *match attractiveness* was important attended fewer matches than others, while those who emphasized *entertainment/ eustress/excitement* attended more often. For these two variables, the differences between season ticket holders and single ticket holders were minor. More highly *educated* people attended less frequently, a pattern that was strongest among spectators with single tickets.

One of the most interesting findings was the lack of correlation between match attendance and *uncertainty of outcome*, a pattern that does not correspond with the attention it has received in the sports economics literature, particularly in theoretical papers. On the other hand, empirical surveys have given only mixed support to its importance for the demand. See Buraimo and Simmons (2008) and Szymanski (2003) for an overview.

As for *other attitude variables*, fans who were disappointed because of the replacement of local players with foreign players attended less frequently, a pattern that was strongest among single ticket holders. The early start of the season did not have a negative effect on the dependent variable. Indeed, according to the regression analyses, those who agreed that it started too early attended more often than others. There is no obvious explanation for this finding. Some fans may dislike the early start, but nevertheless appear at the stadium. On the other hand, we cannot exclude the possibility that those who disliked it would have attended more often if the season had started later.

As for other control variables, travelling time had a strong negative effect, a pattern that particularly applied to spectators with single tickets. Note that the sample only included spectators whose travelling time (one way) was two hours or less. Income had a negative effect, but only for season ticket holders. Men with single tickets attended more often than women, while no difference in attendance between men and women was measured among season ticket holders.

Discussion and Conclusion

The findings in this article indicate that too much televised football can reduce attendance at stadia. The stronger the preference of respondents for televised football, the less frequently they attended matches at the stadium. All matches in the elite league were shown live on TV during the season to which the data refer, with 38% on free-to-air TV channels and 62% on pay TV channels. The regression analyses showed that fans of clubs whose matches were most often on free-to-air TV channels attended fewer matches than those who supported clubs that were less frequently on such channels. Therefore, the growth in the supply of televised football, combined with the high proportion of matches shown on free-to-air channels, might have been one of the reasons for the reduction in attendance at Norwegian elite football matches.

The empirical data illustrate the difficulties of both attracting fans to stadia and maximizing TV audiences. If clubs wish to maintain attendance at matches, they may have to regulate the quantity of televised football, particularly on free-to-air TV channels. One alternative is selling live matches only to pay TV channels, while free-to-air channels are restricted to highlight programs. This has been the policy of the majority of European leagues.

However, the effect of this remedy will be reduced as more fans start subscribing to pay TV channels. Previous research has documented that football fans are more willing to pay to watch their favorite sport than fans of other sports (Hammervold & Solberg, 2006). Another solution is to limit how often specific clubs can be shown, in total or on free-to-air TV channels. The English Premier League has practiced such a policy for the past two decades. During the 2011-12 season, only 21 of Manchester City's (the champions) 38 matches were shown on domestic TV.

Although matches on live TV promote the sport, this also can be achieved by highlight programs. The same applies to international tournaments, both for clubs and national teams. Many of these are shown on free-to-air channels due to the Listed Events regulation, which prevents TV channels with limited markets from exclusively acquiring the rights for sporting events of major importance for society (Gratton & Solberg, 2007).

The ability to watch football without attending the match in the stadium will increase in the future due to technological innovations. For the same reason, the quality of televised matches is also likely to continue to improve. In particular, this may lead fans who emphasise the entertainment dimension to prefer TV over attending matches in the stadium. Furthermore, technological innovations allow football fans to be more geographically mobile than they were even a few years ago. This may make it increasingly difficult to fill stadia, unless the supply of televised football is regulated.

Another problem, which is more difficult to solve, is the growth of televised matches featuring foreign leagues. Many Norwegians also are fans of clubs in the major European leagues, such as England, Spain, and Italy. The data confirmed that the stronger the preference for foreign football, the less frequently the respondents attended Norwegian matches. This corresponds with findings that have documented lower attendance during the months when the Norwegian league's matches overlap those of the big-five leagues (Kringstad & Solberg, 2012). Similar findings have been documented in previous research, which has shown that televised football from domestic leagues and international tournaments can reduce attendance (Allan & Roy, 2008; Baimbridge et al., 1996; Forrest & Simmons, 2006; Garcia & Rodriguez, 2002). However, while those surveys used attendance measured by the clubs, this paper has used the number of matches the individual spectators have reported they have attended. Despite differences in methods, the results lead to similar conclusions.

This pattern is not limited to Norway. In 2005, the English Premier League was the most popular televised football league in China. According to an Internet survey, 83% of Chinese football fans preferred watching the English Premier League to the China Super League.⁸ In 2006-07, the English Premier League rights in China were more than 500% more expensive than the China Super League. Similarly, in 2004, English Premier League football was the most watched sport in Malaysia, Thailand, and Singapore.⁹

Koreans also preferred the English Premier League over their own football league. Australians paid about the same for the English Premier League TV rights as for their own league, while the equivalent percentage in Scandinavia was 72.¹⁰ This is in contrast to the bigger nations (England, Spain, Italy, France, Germany, and the Netherlands), in which football fans primarily are interested in their own domestic leagues. In Italy and the Netherlands, the value of the English Premier League only accounted for respec-

tively two per cent and seven per cent of the values of their domestic leagues (Solberg & Turner, 2010).

Club identification and other variables

The regression analysis showed that *Club identification* was the most effective variable in attracting spectators. The more strongly the respondents identified with their favorite club, the more frequently they attended matches and the more likely they were to prefer season tickets. Such results support the implementation of a long-term strategy aimed at strengthening the relationship between the clubs and their fans. Strong club identification does not mean that fans automatically agree with their favorite clubs on all issues, as the empirical data revealed. Nevertheless, the majority of season ticket holders preferred to attend matches at the stadium instead of watching them on TV. Hence, if their identification with the club is strong, fans are more likely to attend matches regularly, even if they disagree with some of the policies, e.g., the lack of recruitment of local players or the early start of the season. Many clubs in the English Premier League, as an example, have more foreign players than domestic players. So far, however, this factor does not seem to have resulted in reduced attendance.

However, creating and strengthening club identification, and its impact on direct and indirect consumption, is a complex matter (Mehus & Osborn, 2010). Many Norwegian clubs aim to sell more *season tickets* than *single tickets*. This article provides some insight into the subject by comparing the characteristics of season ticket holders and individuals who bought single tickets. Male spectators with high income, scoring high on club identification, are likely to purchase season tickets. However, high income and high levels of education have a negative effect on attendance, a pattern that corresponds with previous findings (Mehus, 2005). This paradox suggests that not all season ticket holders attend many matches, with the availability of televised matches being an obvious explanation.

In Norway, very few matches in the elite league were sold out. Only two clubs had a capacity utilization exceeding 80%. This illustrates that football fans do not have any problems finding tickets. Therefore, at least in the short term, to raise or at least maintain attendance, it may be more effective to regulate the quantity of televised football rather than to implement efforts to stimulate spectators to buy season tickets instead of single tickets.

As for other instruments, the regressions indicated that more recruitment of local players could have some effects, particularly among single ticket holders. At least they showed that those who were disappointed attended less frequently. Many of the other variables, however, are beyond the control of the clubs. This, as an example, applies to match attractiveness. During a season, some matches will be more important than others. Furthermore, some away teams will have more star players than others. Some spectators are mainly interested in attending matches of special importance, or when the away team is very attractive or has some special attractive players.

Another variable that is difficult for the clubs to influence is education. According to the regressions, higher educated people attended fewer matches than others, a pattern that applied to both season card holders and spectators with single tickets. One reason for this may be that higher educated people are involved in more activities than others, which in turn limits how often they attend at football matches.

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Endnotes

¹<http://www.ft.com/cms/s/0/4bf99e6c-b580-11e1-b8d0-00144feabdc0.html#axzz2SgfSaLFR>

²<http://www.nfl.com/news/story/09000d5d82a406ee/article/nfl-eases-local-TV-blackout-restrictions-for-upcoming-season>

³<http://fotball.aftenposten.no/eliteserien/article210249.ece>.

⁴Editor of *Kampanje*, the leading Norwegian magazine on marketing and media.

⁵Telephone interview, November 6, 2013.

⁶Unweight.

⁷Unweight.

⁸*China Daily*, August 24, 2005. Retrieved January 12, 2006, from <http://china.org.cn/english/sports/139588.htm>.

⁹*Irish Independent*, October 3rd, 2004. Retrieved July 7, 2006, from http://unison.ie/irish_independent/stories.php?ca=35&si=1261912&issue_id=11502.

¹⁰The Scandinavian rights were sold as one unit, which makes it impossible to separate the values in the specific nations.

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