



The Effect of the First Goal on the Score of the Match and Home Advantage in Football: Analysis of Turkish Super League and 1st League in Pre-Pandemic and Pandemic Periods

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Abstract

The present study was conducted to examine and analyze the home advantage in the Turkish Soccer Super League and TFF 1st Soccer League matches played pre-pandemic and pandemic periods. The study data that were obtained by evaluating the results of the competitions played in the last two seasons (2019-2020 and 2020-2021) were analyzed by using the number of matches won by the teams as the home and away teams, the effects of the first goal scored on the score of the match, and the home advantage. The data obtained in this way were recorded in the SPSS 18.0 programme, was then interpreted by calculating the frequency and percentage values. In the last two seasons that were examined, as the pre-pandemic period, the home advantage was found to be 53.57% in a total of 486 matches in the Super League and TFF 1st League in the 2019-2020 season, and the home advantage value was 52.42% in the Super league, and 54.37% in the TFF1 League. In the 2020-2021 season, which has been continued during the pandemic process, the percentage of total home advantage in 420 matches in the Super League and 306 matches in the TFF 1st League was found to be 50.64%, and the percentage of home advantage values decreased to 50.79% in the Super League and 50.43% TFF 1st Soccer League. Pre pandemic period, after the first goal scored by the home teams in the competitions in the 2019-2020 season, 61.11% of the matches in the TFF 1st League, and 72.97% in the Super League ended with a win; and in the 2020-2021 season of the pandemic period, 74.52% of the matches ended with a win in the Super League, and 77.85% of them resulted in a win in the TFF 1st League. As a result, the rate of leaving the football pitch with a win after the first goal in the matches played in both the Super League and the 1st League was found to be quite high. Based on this viewpoint, it can be argued that the first goal scored in football competitions is an important factor affecting the result directly. However, it is considered that the spectator factor plays an important role in the home advantage in football based on the fact that the home advantage values of the football teams decreased in the season played with spectators compared to the values in the games played in the season without spectators.

Keywords: Football, Pandemic, Match Analysis, Goal, Home Advantage.

Futbolda İlk Golün Maçın Skoruna Etkisi ve Ev Sahibi Olma Avantajı: Pandemi Öncesi ve Pandemi Dönemi Türkiye Süper Lig ve 1. Ligin Analizi

Özet

Bu çalışma, Türkiye Futbol Süper Ligi ve TFF Futbol 1. Liginde pandemi öncesi ve pandemi dönemi oynanan müsabakalarda, ev sahibi olma avantajının incelenerek analiz edilmesi amacıyla yapılmıştır. Son iki sezon zaman diliminde (2019-2020 ve 2020-2021 sezonu) oynanan müsabakaların sonuçları değerlendirilerek elde edilmiş olan araştırma verileri, takımların ev sahibi ve deplasman takımı olarak maç kazanma sayıları, atılan ilk golün maçın skoruna etkisi ve ev sahibi olma avantajı gibi teknik parametrelerin analizi yapılarak incelenmiştir. Elde edilen veriler SPSS 18.0 programında kaydedilmiş, frekans ve yüzde değerleri hesaplanarak yorumlanmıştır. İncelenen son iki sezonda, pandemi öncesi dönem olarak, 2019-2020 sezonunda Süper lig ve TFF 1. ligde oynanan toplam 486 müsabakada ev sahibi olma avantajı %53.57 olarak belirlenirken, bu süreçte, ev sahibi olma avantajı değerleri Süper ligde %52.42; TFF1. Ligde %54.37 olarak bulunmuştur. Pandemi sürecinde devam eden 2020-2021 sezonunda, Süper ligde 420 müsabaka ve TFF 1. ligde 306 müsabakada toplam ev sahibi olma avantajı yüzdesi %50.64 olarak belirlenirken, bu süreçte, ev sahibi olma avantajı değerleri yüzdesi Süper ligde %50.79'a, TFF 1. Ligde ise %50.43'e gerilemiştir. Pandemi öncesi 2019-2020 sezonunda oynanan müsabakalarda iç sahada ev sahibi takımların attıkları ilk gol sonrası, TFF 1. Ligde maçların %61.11'i, Süper Ligde ise %72.97'si galibiyetle biterken, pandemi dönemi 2020-2021 sezonunda, Süper Ligde maçların %74.52'si, TFF 1.Ligde ise %77.85'i galibiyetle sonuçlanmıştır. Sonuç olarak, hem Süper Lig hem de 1.Ligde oynanan maçlarda atılan ilk gol sonrası müsabakadan galibiyetle ayrılma oranı oldukça yüksek bulunmuştur. Bu noktadan hareketle, futbol müsabakalarında atılan ilk golün sonuca doğrudan etki eden önemli bir faktör olduğu söylenebilir. Diğer taraftan, futbol takımlarının seyircili oynanan sezondaki ev sahibi olma avantajı değerlerinde seyircisiz oynanan sezondaki maçlarda ortaya çıkan değerlere göre düşüş yaşanmasından yola çıkarak, futbolda ev sahibi olma avantajı üzerinde seyirci faktörünün önemli bir rol oynadığı düşünülmektedir.

Anahtar kelimeler: Futbol, Pandemi, Maç Analizi, Gol, Ev sahibi olma avantajı.

INTRODUCTION

“Goal” is the biggest expression of the game in football because the winner of a match is determined by the team that scores the most goals. For this reason, it is very important to understand how goals are scored, their frequency, and the way they occur especially when the low number of goals scored in competitions is considered (17). Goal is also the key to success for teams. The analysis of all matches played in a major football tournament is considered as an important variable allowing multiple evaluations (12). The “home” advantage is another very important variable as well as the goal, which is one of the most important criteria in the football branch.

The advantage of playing at home, which can also be expressed as playing the games infield in competitive sports branches, is considered as an important factor, which must be considered. This will allow us to know what effect the infield or outfield competition has on the outcomes of sports

competitions (14). Playing a football match infield or outfield can affect the athletes in the team positively or negatively (8). Football teams generally achieve more success in home matches (25).

It is an already known fact for a very long time that the home advantage is a very important criterion in football in determining the result of a match (19). The importance of home advantage was shown in many team sports including football. It was reported in previous studies that the support of the fans of the home team is a possible causal factor, and plays a very important role in the effects of referees in the decision-making process (5). Although the results of many previous empirical studies were not conclusive, it is believed that mass support has a particularly powerful effect in most sports. Also, although the size of the large audience does not seem to be a relevant factor, the effect of audience behaviors on competitors has been proven difficult to be detected (28).

There are some factors affecting the performance at significant levels, such as the audience, referee, weather and pitch conditions, and the performance level of the opponent has significant effects on the success or failure of teams (15). Courneya & Carron (4) reported that the home advantage in football is highly effective on the performance of a team in addition to the abovementioned factors. In this context, the purpose of the present study was to examine and analyze the home advantage in the Turkish Super League and TFF 1st League matches played before and after the pandemic. Based on this viewpoint, the results of the competitions played in the last two seasons (i.e. 2019-2020 and 2020-2021) were evaluated by analyzing the technical parameters e.g. the number of matches won by the teams as home and away teams, the effect of the first goal scored on the score of the match, and the home advantage.

METHOD

The matches played in the Turkish Football Super League and TFF 1st League in the 2019/2020 and 2020/2021 seasons were analyzed in the present study, which was analyzed as two separate periods, the pre-pandemic and pandemic period matches were examined in terms of the home advantage, the effect of the first goal scored in the home and away fields on the score of the match, and the average points per match variables. The ethical approval of the study was received from the Non-Interventional Clinical Research Ethics Committee of the Faculty of Sports Sciences of Selçuk University with the decision number 126 on 30.09.2021.

The data of the last two seasons of the competitions played in the Turkish Football Super League and TFF 1st League in the 2019/2020 and 2020/2021 seasons were evaluated in the study based on data which can be accessed on the official website of the Turkish Football Federation. In this respect, a total of 486 matches were played in the 2019-2020 season, 234 in the Super League and 252 in the 1st League. A total of 726 games were played in the pandemic period 2020-2021 season, 420

matches in the Super League, and 306 in the TFF1 League. In this respect, a total of 1212 matches played in the last two seasons of both leagues were examined in the scope of the study.

In the Turkish Super League, the period until the 26th week of the 2019-2020 season (13-16 March 2020) is taken as the pre-pandemic period. During this period (before the pandemic), 234 matches were played in the Super League. In this season, 252 matches were played in the TFF 1st League until the 28th week (14-16 March 2020).

Point system in soccer: According to the "Points Method System", 3 points are given to the winning team in the competitions, and 1 point to the draw teams. No points are awarded to the losing team (27).

Home Advantage: In the calculation of the home advantage values, the points of the teams as the home team in a completed season were evaluated as the percentage of the total of the points in the matches played both as the home team and the away team (18, 19, 20).

Data Analysis: All the data obtained in the study were recorded in the SPSS 18.0 program, and the frequency and percentage values of these data were calculated and interpreted.

RESULTS

The findings obtained in the study are given in this part. Turkish Super League and TFF 1st League competitions were examined for the 2019-2020 and 2020-2021 seasons; and in this respect, the home advantage of the teams, the effect of the first goal scored in the infield and outfield on the score of the match, and the average points per match were determined and presented in tables and graphics.

Table 1. The effect of the first goal scored in the home field pre-pandemic period and during the pandemic period on the score of the match and the average score per game

Season	League	W	%	D	%	L	%	Home Field	Average score per match
								Total Number of matches	
2019-2020	Super League	81	72.97	21	18.92	9	8.11	111	2.59
	TFF 1.League	55	61.11	28	31.11	7	7.78	90	2.14
	TOTAL	136	67.66	49	24.38	16	7.96	201	2.27
2020-2021	Super League	158	74.52	39	18.39	15	7.07	212	2.42
	TFF 1.League	116	77.85	16	10.73	17	1.40	149	2.44
	TOTAL	274	75.90	55	15.23	32	8.86	361	2.43
W: Win D: Draw L: Loss		2019-2020: Pre Pandemic Period				2020-2021: Pandemic Period			

When the matches that were concluded with a win, loss, or draw after the first goal scored by the home teams were evaluated in the competitions, it was found that 81 wins (72.97%) and 21 draws (18.92%) were achieved with the first goal scored by the home teams in the competitions played in the Super League in the 2019-2020 Season, and the average of points per game was 2.59. There were 55 wins (61.11%) and 28 draws (31.11%) with the first goal scored by the home teams, and the average score per match was 2.14 in the competitions played in the TFF 1st League in the 2019-2020 season before the pandemic. The teams had 158 wins (74.52%) and 39 draws (18.39%) with the first goal scored in the home field in the Pandemic period 2020-2021 Season Super League, and the average score per game was 2.42. In the TFF 1st League, in the competitions played in this season, after the first goal that was scored by the home teams in the home field, 116 matches were won (77.85%), 16 matches ended in draw (10.73%), and the average score per game was 2.44.

Table 2. The effect of the first goal scored in the away field pre-pandemic period and during the pandemic period on the score of the match and the average score per game

Season	League	W	%	D	%	L	%	Away Field	Average score per match
								Total Number of matches	
2019-2020	Super League	52	57.14	26	28.57	13	14.29	91	2.00
	TFF 1.League	51	54.26	28	29.78	15	15.96	94	1.93
	TOTAL	103	55.68	54	29.19	28	15.13	185	1.96
2020-2021	Super League	118	62.43	41	21.69	30	15.87	189	2.09
	TFF 1.League	90	69.23	20	15.38	20	15.38	130	2.23
	TOTAL	208	65.20	61	19.12	50	15.67	319	2.15
W: Win D: Draw L: Loss		2019-2020: Pre Pandemic Period				2020-2021: Pandemic Period			

When the matches end in a win, loss, or draw after the first goal scored by the away field teams in the competitions, it is seen that there were 52 wins (57.14%) and 26 draws (28.57%) in the first goal scored in the matches played in the away field in the Super League of the 2019-2020 Season, and the average score per game in the competitions was found to be 2.00. There were 51 wins (54.26%) and 28 draws (29.78%) in the first goal scored by the TFF 1st League teams in the matches played in the away field in the same season, and the average score per game was found to be 1.93 in these competitions. In the Super League in 2020-2021 Season, there were 118 wins (62.43%) and 41 draws (21.69%) with the first goal scored in the outfield, and the average score per game was found to be 2.09 in these competitions, and there were 90 wins (69.23%) and 20 draws (15.38%) with the first goal scored by the TFF 1st League teams in the matches played in the away field in the same season, and the average score per game was found to be 2.23 in these competitions.

Table 3. Home advantage pre-pandemic period and during the pandemic period

Season	League	Home team	Away team	Home - Away teams	Total number of matches	Home Advantage (%)
		W	W	D		
2019-2020	Super League	101	68	65	234	52.42
	TFF 1.League	109	59	84	252	54.37
	TOTAL	211	127	148	486	53.57
2020-2021	Super League	174	128	118	420	50.79
	TFF 1.League	132	109	67	306	50.43
	TOTAL	306	237	185	726	50.64

W: Win D: Draw 2019-2020: Pre Pandemic Period 2020-2021: Pandemic Period

It was observed in the study that although the home advantage value was found to be 52.42% in the 2019-2020 season of Super League before the pandemic, this decreased to 50.79% in the 2020-2021 season in the pandemic period. Although the home advantage value was found to be 54.37% in the 2019-2020 season before the pandemic in the competitions in the TFF 1st League, it was found that this value decreased to 50.43% in the 2020-2021 season in the pandemic period.



Figure 1. Home advantage pre-pandemic period (2019-2020 Season) and during the pandemic period (2020-2021 Season)

DISCUSSION

The present study was conducted to analyze the home advantage in the Turkish Football Super League and TFF 1st League matches before and pandemic period. In the study, in which the results of the competitions played in the last two seasons (2019-2020 and 2020-2021 seasons) were evaluated, technical parameters (e.g. the number of wins of the teams as the home and away teams, and the effect of

the first goal on the score of the match, and the home advantage) were examined and analyzed.

Both the Super League (72.97%) and the TFF 1st League (61.11%) home teams had mostly a win after their first goal in the 2019-2020 season. Similarly, the home team's win rate after the first goal scored in both the Super League (74.52%) and the TFF 1st League (77.85%) was quite high in the 2020-2021 season of the pandemic period. Away teams won 57.14% of the matches after their first goal in the

Super League in the 2019-2020 season, which was 54.26% in the TFF 1st League. The win rate after the first goal scored by the home teams in the Super League was determined as 62.43% in the Super League in the 2020-2021 season of the pandemic period, which was 69.23% in the TFF 1st League.

As another variable that was examined in the study, when the advantages of being the home team were examined, it was found that there was a decrease in the home advantage values in both the Super League and the TFF 1st League when compared to the pre-pandemic period. In the last season played before the pandemic, the audience factor can be considered among the important factors that affect the home advantage, considering that the home advantage values decreased in the competitions played without spectators in both leagues during the pandemic period.

In a previous study that was conducted by Inan (9) regarding crowd support and being the home team advantage in football, it was found that the support of the supporters and audience density were found to be important variables contributing to home advantage in football. In the study that was conducted by Subak & Kaya (24) in which the home advantage and the spectator effect was analyzed in the Turkish Super League in the Covid-19 season, it was found that the Covid-19 pandemic affected football players; and when all the results were examined, a decrease was found in the infield performance and an increase in the away performance. On the other hand, it was also reported that playing a match without spectators seemed to be an important factor for success in football.

Pratas et al. (22) conducted a study in the Portuguese Premier League, and reported that, when the home teams scored the first goal, the rate of leaving the pitch with a win was found to be 74.59%, and the rate of leaving the matches with a win when the away teams scored the first goal was found to be 62.22%. In their study, Inan et al. (10) reported the rate of the home teams scoring the first goal in the match was 56% in the German Bundes Liga, 52% in the Italian Serie A, 52% in the English Premier League, and 53% in the Spanish La Liga. After the first goal is scored, the rates of winning the match were found to be 70% in Bundes Liga, 75% in Serie A, 75% in Premier League, and 78% in La Liga.

In a study that was conducted by Armatas & Yiannakos (3) in which the 2006 World Cup was

analyzed, it was found that the team that scored the first goal won the matches (73.21%). The rate of winning after the first goal scored in tournament matches was examined in a study conducted by Leite (12), and the average of this rate was found to be 71.06% in the examined FIFA World Cup matches, 70.04% in matches in UEFA European Championships, 70.21% in the CONMEBOL Cup of America; and 68.73% in the AFC Asian Cup.

In a study that was conducted by Armatas et al., (2) on the Greek Super League, it was reported that 71.43% of the teams that scored the first goal in the matches left the matches after winning, and 16.19% of the matches ended in a draw. In another study that was conducted by Molinuevo & Bermejo (14) on Spanish La Liga, it was found that the first goal scored in 56.96% of the matches played in the league were the home team's, and the home advantage was found to be 60.21%. In the study that was conducted by Sampedro & Pietro (23), the effects of scoring the first goal on the results of the matches were examined, and it was found that the teams that scored the first goal won the game with a high rate (79.32%). In Leite's study (11) in which the goals scored in Euro 2012 were analyzed, when the effects of the first goal scored in the matches were examined, it was found that the teams scoring the first goal won the games in 70.97% of the matches, 16.13% ended with draw, and only 6.45% ended with defeat.

In some previous studies conducted on the home advantage in football, advantage of being the home team values were reported as follows; Allen & Jones (1) 60.78% in the English Premier League; Göral (6) 60.07% in the Turkish Super League; Leite (13) 57% in France, 57.5% in the Netherlands, 60.7% in Belgium, 61.2% in Spain; Pollard & Gomez (21) 62.25% in Italy, 60.82% in Mexico, 64.89% in Brazil; Talab & Mehrafar (25) 52.5% in the Iranian Super League.

In his study, Öndes (16) evaluated the performance indicators affecting the home advantage in the framework of a long-term analysis which covered the last 22 years of the Turkish Super League, 6732 matches in total, and found that the probability of winning the matches played at home was greater than the probability of winning the matches played away. In a study that was conducted by Tütüncü & Yolgörmez (26), the performance of the home teams was compared in the matches played in the Bundes Liga, Premier

League, Seria A, La Liga, and Turkish Super League in the 2019-2020 Season before (with spectators) and after the pandemic (without spectators), and although no percentage differences were detected in the parameters of the home teams, increased percentages were detected in the outfield teams. In this case, it was argued that although the matches played with or without spectators had no effects on the performances of the home teams, the absence of spectators might have increased the performances of the teams in outfield matches. Wolfson et al. (27) emphasized that fans can develop mechanisms to help their teams cope with disappointing results to maintain the positive results of commitment to their team and reduce the potential discomfort of losing in football.

According to the indices of average points per game and average team performance scores in football leagues in Turkey, the score range of "2.294-3.000" in the Super League and "1.983-3.000" in the TFF 1st League are included in the "very good" class. Also, "1.591±0.137" points in the Super League and "1.680±0.115" points in the TFF 1st League can

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be sufficient as an average of points per game to finish the league in the top five ranks (7). According to the results of the study, when the average points per game collected both in the home field (2.42 points) and away field (2.12 points) in the pre-pandemic season and in the home field (2.43 points) and away field (2.15 points) during the pandemic period were considered, it can be argued that scoring the first goal in competitions is a very important factor in reaching the targeted levels in football.

CONCLUSION

In conclusion, it can be argued based on the findings of the present study that the first goal scored in football is an important factor that affects the result directly. On the other hand, based on the decreased home advantage values of the football teams in the season played with spectators when compared to the values in the games played in the season without spectators, it is considered that the spectator factor plays an important role in the home advantage in football.

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